



ESTABLISHED 1856.

Subscription: Fourpence a Week, Ten Shillings a Year.
Summer and Winter Numbers 1s. per Copy.

CHIEF OFFICES: 42 CANNON STREET, LONDON, E.O.
BRANCH OFFICES: 231 ELIZABETH STREET, MELBOURNE,
VICTORIA, AND EMPIRE CHAMBERS, YORK STREET,
SYDNEY, N.S.W.

CONTENTS: Vol. XLX No. 3

	PAGE		PAGE
Bankruptcies and Failures	77	English News	65
Business Changes	77	Foreign and Colonial News	70
Corner for Students	64	French News	69
Correspondence:—		Gazette	77
The Importation of Pro-		Incorporated Society of In-	
prietary Articles into		spectors of Weights and	
France; Piperazine in		Measures	76
Gout; Somerset House		Irish News	69
Milk; Insects and Drugs ..	91	Legal Reports	84
The New Duty on Cocoa-		Marriages	70
butter; Fatal Formulae;		New Books	70
Voluntary Early-closing;		New Companies and Company	
Carter's Prices; Daisy-		News	86
powders	92	Personalities	76
Miscellaneous Inquiries	93	Pharmaceutical Society of Great	
Deaths	70	Britain:—	
Deaths of Arrangement	77	July Examinations	82
Editorial Comments:—		First, &c., Examinations ..	82
A Chemical Contrast	78	Scotch News	69
Business of the Future	79	Society of Chemical Industry:—	
German Competition	80	Annual Meeting	71
How to Get to the Conference		Trade Notes	76
Fewer Failures; M. Pressive		Trade Reports	87
Advice; Beef-and-malt			
Wine	81		

OUR SUMMER NUMBER.

THE next issue of THE CHEMIST AND DRUGGIST, July 25, will be our Annual Summer Number. In consequence of its increased size, and the exceptional typographical care with which it must be produced, we are compelled to go to press a day earlier than usual. Our correspondents and reporters will oblige by noting this fact, and sending in their "copy" promptly, and before Wednesday, if possible.

AS TO ADVERTISEMENTS,

the publisher wishes us to state that he will close his order-book for the Summer Number on Tuesday, July 21, and he cannot take orders for displayed advertisements after that day. Advertisers who have not yet reserved space in the issue should telegraph their requirements without further delay, and copy for advertisements should be sent in immediately. Proofs of advertisements cannot be guaranteed after Tuesday. Those who are inserting circulars and price-lists will oblige by ensuring that their printers have dispatched the insets by this date (July 18).

ADVERTISEMENTS FOR THE COLOURED SUPPLEMENT, such as situations open and wanted, businesses wanted and for disposal, partnerships, and Exchange-column advertisements will be received as usual up to Thursday, but it will greatly facilitate our arrangements for the prompt dispatch of copies if we receive small advertisements early in the week also.

SUBSCRIBERS

will bear in mind that these large special issues are delivered by parcel post or carrier, paid to destination, and all copies should be delivered in the United Kingdom about the same time as the ordinary weekly issue.

Summary.

THE new combined anti-cutting agreement is reprinted on p. 68.

MR. C. J. PARK, the new pharmaceutical councillor, has been "dined" by his Plymouth *confrères* (p. 66).

THE Goldsmiths' Company have given another 1,000*l.* to the Imperial Institute Research Laboratory (p. 65).

THE names of those who have passed the Major examination in London and Edinburgh and the Minor in London this month are printed on p. 82.

SIX cases of carbolic-acid poisoning are reported on p. 68, along with some pregnant remarks by the Manchester Coroner regarding the free sale of the poison.

MESSERS. J. GROSSMITH & Co., of Newgate Street, have to quit their premises, and they sought 13,000*l.* odd as compensation from the Central London Railway Company. They get 9,000*l.* (p. 84).

THE Registrar of Joint-Stock Companies told the House of Lords Committee last week that a thousand millions of capital are invested in those concerns in England alone (p. 79).

"CAN'T stand the pressure" was the message which a Ramsbury chemist left on his shop-counter before he went into the kitchen and swallowed a fatal dose of prussic acid (p. 67).

A NUMBER of excursions are reported on pp. 66 and 67, amongst them one given by Messrs. F. Newbery & Sons in celebration of the 150th anniversary of the establishment of their business.

IN this issue are printed the questions given at three of the Pharmaceutical Society's written examinations this week—viz., the "First," Jacob Bell Scholarships, and Council Prizes Examinations (p. 82).

A MIXTURE of barium and strontium carbonates and potassium nitrate was not too stiff for our analytical students, but nearly half of them missed the strontium. Mr. R. J. Moss's report and notes are given on p. 64.

BETWEEN two and three hundred syphons belonging to Messrs. E. Geraut & Co. appear to have gone amissing. They say they supplied them to the Holborn Board of Guardians with waters. The facts of the case are stated on p. 67.

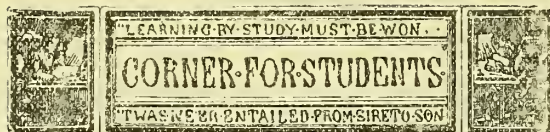
MR. STEAD, the editor of the *Review of Reviews*, asks us to join in a crusade for pressing on Parliament the necessity of passing a Technical Education Bill this session, in view of German competition, the seriousness of which he has just awakened to (p. 80).

WE briefly report the annual meeting of the Incorporated Society of Inspectors of Weights and Measures, at which Mr. E. J. Bevan, the analyst, discussed some points in connection with the Sale of Food and Drugs Act, and referred slightly to Somerset House chemists (p. 76).

THE Neath Board of Guardians have had an interesting dispute with one of their medical officers in respect to the supply of medicines. The officer has had the contract hitherto, but the Board wish the medicines to be supplied by chemists. A half-way course has been adopted (p. 65).

THE Foreign Office informs us that Lord Dufferin has made inquiries in Paris regarding the difficulties which English chemists in France have in importing English medicines into the country, and Lord Salisbury does not think it desirable to make any representation to the French Government (p. 91).

THE annual meeting of the Society of Chemical Industry commenced in London on Wednesday. The Society is steadily progressing. Mr. Thomas Tyrer, the President, delivered an address in which he showed that the exportation of tinctures from the United Kingdom under the drawback has been a success. He also discussed the competition between England and Germany, and called for a more thorough scheme of technical education. The Society's first gold medal was awarded to Mr. John Gover, the designer of the Gover Tower. Our report, illustrated with portraits, begins on p. 71.



CONDUCTED BY RICHARD J. MOSS, F.C.S., F.I.C.

QUALITATIVE ANALYSIS.

THE subject of the next exercise in qualitative analysis will be a mixture of not more than three salts. The mixture is to be submitted to a thorough systematic examination, all its constituents are to be detected, and proof is to be given that the substances detected are the only constituents of the mixture.

Students' applications for portions of the mixture of salts (accompanied by a stamped and addressed envelope, not a stamp merely) will be received up to Wednesday, July 22, and the samples will be forwarded immediately.

Students' reports will be received up to Saturday, August 1. Each report should contain a concise account of the work done, and should include a list of the constituents detected. In this list any substance regarded as an accidental impurity should be distinguished from the essential constituents of the salts composing the mixture.

REPORTS.

The powder distributed for analysis last month consisted of equal parts of barium carbonate, strontium carbonate, and potassium nitrate.

Its calculated composition was—

Ba	..	..	..	..	..	23.18
Se	..	..	..	..	..	19.78
K	..	..	..	..	..	12.87
CO ₂	..	..	..	..	..	23.71
NO ₃	..	..	..	..	..	20.46
						100.00

Traces of calcium and chlorine were present as impurities.

Samples of the mixture were sent to forty-three applicants, and in reply twenty-nine reports of analyses were received. The failures in the detection of the several constituents of the powder were:—Barium, 1; strontium, 12; potassium, 4; carbonic radicle, 0; nitric radicle, 4.

When a minute portion of the powder, moistened with hydrochloric acid, was introduced into the Bunsen flame on a platinum wire, it was possible with care to observe the colorations characteristic of the three metals in the mixture. Holding the wire as close as possible to the top of the Bunsen burner, so that it was in the coolest part of the flame, and did not become hot enough to appear red, the violet tint due to potassium was very distinctly seen. On introducing the wire into a hotter part of the flame the red of strontium was momentarily visible, and then the faint green tint of barium. When the wire was placed in the hottest part of the flame, or, better still, when it was heated with the blowpipe, the green colour gradually faded and the pure red of strontium remained. It required strong ignition, continued for some time, to volatilise the last traces of strontium. Under no circumstances does calcium give such a brilliant red coloration, or one of such persistence. The flame-coloration produced by lithium resembles that of strontium, but lithium and its salts are much more volatile, and therefore the coloration of lithium is much less persistent. With the aid of the spectroscope potassium, barium, and strontium could be detected in the powder with

the greatest ease and certainty, but unfortunately a spectro-scope is not at the service of every student.

The separation of the metals of the alkaline earths by wet methods presents some difficulty. Barium, on account of the insolubility of its chromate, is the easiest to dispose of. The solubility of calcium sulphate in a strong solution of ammonium sulphate admits of its separation from strontium, the sulphate of which is almost completely insoluble in that reagent. A more precise method of separation is based upon a similar difference in the solubilities of the nitrates in absolute alcohol, or a mixture of absolute alcohol and ether. Either of these methods carefully carried out will give very good results.

PRIZES.

The First Prize for the best analysis has been awarded to

HENRY JOHN HENDERSON, care of Mr. J. A. Nurse, 59 High Street, Lowestoft.

The Second Prize has been awarded to

H. MILLER, 18 Wellington Street, St. John's, Blackburn.

MARKS AWARDED FOR ANALYSES.

H. J. Henderson (1st prize)	..	93	R. E. J.	..	..	..	81
H. Miller (2nd prize)	..	..	Edina	..	..	..	80
H. W. J. Browne	..	..	G ycol	..	..	..	78
Nem'en Veut pas	..	..	Calyx	..	..	..	75
J. Hackett	..	..	W. G. S.	..	..	..	73
Anisi	..	..	J. Dysou	..	..	..	70
C. J. Packham	..	..	W. C. Pickering	..	..	..	65
H. A. Jackson	..	..	Thoroughly	..	..	..	60
Elemi	..	..	Eneas	..	..	..	55
Rhutra	..	..	Guillaume	..	..	..	53
E. Ockenden	..	..	Rita	..	..	..	50
Fallow	..	..	St. Michael	..	..	..	45
Cumbriana	..	..	F. H. K.	..	..	..	40
Clio	..	..	Alex	..	..	..	35
Rosierucian	..	..	..	..	..	..	..

TO CORRESPONDENTS.

Prizes.—The students to whom prizes are awarded are requested to write at once to the Publisher, naming the book they select, and stating how they wish it forwarded.

Any scientific book that is published at a price not greatly exceeding half a guinea may be taken as a first prize.

Any scientific book which is sold for about five shillings may be taken as second prize.

Note.—All communications should include the names and addresses of the writers.

H. MILLER.—The powder rendered water very slightly alkaline, but the pure carbonates of the alkaline earth-metals produce this effect; they are perceptibly soluble in water.

H. A. JACKSON.—Testing for calcium was not such a simple matter in this case. If you had applied the flame-test to the oxalate you obtained, you would have detected strontium. A better plan than that you adopted was to completely precipitate the strontium and trace of calcium as sulphates in the presence of alcohol, and then digest the precipitate with ammonium sulphate. Strontium sulphate is almost completely insoluble in the latter reagent, while calcium sulphate dissolves.

ELEMT.—The separation of strontium and calcium by methods based on the difference in the solubilities of the sulphates requires care. See remarks to H. A. Jackson.

RHUTRA.—You will see by the figures given above that strontium was present in considerable quantity. Silver nitrate added to a nitric-acid solution of the powder produced a turbidity, but no precipitate.

E. OCKENDEN.—It is probable that the solution to which you added silver nitrate contained sufficient sodium carbonate to precipitate a little silver oxide.

FALLOW.—With absolute alcohol the method you employed would have separated strontium from any calcium present, but the more water there is in the alcohol the less complete is the separation.

CUMBRIANA.—You merely state that strontium was absent, without giving any proof of its absence. Your supposed calcium oxalate was really strontium oxalate, as the flame-coloration would have shown if you had tried the experiment.

CLIO.—A solution of calcium sulphate contains very little sulphuric acid, and it only precipitates strontium slowly. You should allow twenty minutes to elapse before concluding that there is no precipitate.

ROSIERUCIAN.—An extremely minute quantity of ammonia may have been evolved, certainly not enough to produce the fumes you observed.

R. E. J.—If you had compared the red flame-coloration you observed with that produced by a calcium salt, you could scarcely have failed to see the marked difference.

EDINA.—Perhaps you did not allow sufficient time for the strontium sulphate to precipitate. If the powder had contained lithium, you should have been able to adduce further proof of its presence.

GLYCOL.—The pungent odour you mistook for acetic acid was due simply to nitric acid—volatilised in one case, and in the other mechanically carried by the escaping carbon dioxide.

CALYX.—Twenty per cent. of nitric acid was a large quantity to overlook. You must have made some serious mistake in the tests you applied.

W. G. S.—On adding ammonia to the hydrochloric-acid solution of the powder you obtained a precipitate. This reaction we failed to confirm. There was no appreciable quantity of phosphoric acid in the powder.

J. DYSON.—You did not extract half enough information from the flame-coloration. There was a great deal to be observed.

W. C. PICKERING.—Quite a large residue of potassium chloride remained when the filtrate from ammonium carbonate was evaporated to dryness and ignited, but you appear to have omitted this important though trouble some operation.

THOROUGHLY.—Your analysis did not include any method for the separation or detection of strontium.

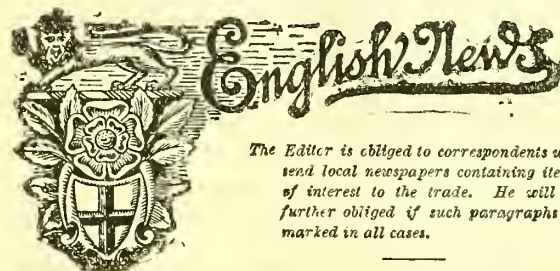
ENEAS.—Ammonium carbonate gave a very abundant precipitate when added to a solution of the powder in hydrochloric acid. The reagent should have been added until no further precipitate was produced, and after warming and filtering the filtrate should have been tested with ammonium carbonate to make sure that the precipitation was complete. You evidently omitted this precaution, hence the precipitate you obtained on adding a phosphate to the filtrate.

GUILLAUME.—The coloration you observed with turmeric paper was due to hydrochloric acid. Care must be taken to distinguish this dark colour from the red tint produced by boric acid.

RIITA.—The powder dissolved in dilute acetic acid; part would have been insoluble if calcium and the oxalic radical had been present.

ST. MICHAEL.—See remarks to "Eneas."

F. H. K.—You failed to observe that a large part of the powder—nearly quarter of it—was soluble in water.



Sale of Laudanum.

The Brighton Coroner held an inquest last week on a man named Cooper, aged 46, who had died from laudanum-poisoning. Superintendent Raggett said he believed the poison was bought from the Sussex Drug Stores. Several chemists had refused to serve the deceased, because he asked for so much, and one had done so because he seemed under the influence of drink. The Coroner said if the man were served with laudanum whilst under the influence of drink it was a great shame. He thought greater restriction should be placed upon the selling of laudanum. A person could go from place to place and obtain any amount he required. Any chemist could sell laudanum provided he put a label on the bottle.

Imperial Institute Research.

The Goldsmiths' Company has contributed a second donation of 1,000*l.* to the Imperial Institute, to be applied to the extension and better equipment of its laboratories. The Salters' Company has also established a Research Fellowship of the value of 150*l.* a year in connection with the scientific department, tenable by chemists qualified to undertake the investigation of new or little-known natural products received by the Institute from the colonies and India. We understand that several of the workers now in the Pharmaceutical Research laboratory are to proceed to the Imperial Institute.

They Want Bovril.

Some time ago the Urban Council of Hornsey remitted to the Medical Committee a recommendation to provide Bovril for the patients in the hospital. The committee again reported at last week's meeting of the council, stating that, having regard to the analysis and particulars which were before them, they decided to adhere to their proposal that a supply of Bovril be obtained in large quantities from the company manufacturing it, quotations of price having been received. Dr. Samuel Fleming, Chairman of the Medical Committee, said they came to the conclusion to recommend the Council to have Bovril. Mr. Crump: I hope you will have a system of analysis. Dr. Fleming: We should be very pleased to have it analysed if the Council will pay for it. Mr. Crump: We ought to. The report was adopted.

Doctors or Chemists as Dispensers.

In May last the Guardians of the Neath Union (Glamorganshire) passed a resolution relative to the supply of expensive medicines. At that meeting a bill had been sent in for expensive medicines supplied by Dr. J. Hopkin Davies, of Taibach, one of the medical officers, and the resolution ordered that in future such medicines should be supplied by the local chemist instead of by the doctor, as theretofore. Dr. Davies subsequently wrote to the Guardians pointing out that the scheme could not be carried out; that in his scattered district in several populous places there was no chemist; and even in his own immediate locality—viz., at Taibach—there was no resident chemist. He strongly opposed the action of the Board, and maintained that a serious responsibility would rest upon the Guardians if, in a case of emergency, the prescriptions could not be dispensed because of the resolution. Thereupon the Rev. J. Foulkes, one of the Guardians for Aberavon, gave notice to rescind the resolution, and the matter came on for discussion at the last meeting of the Board. Mr. Foulkes, in moving his resolution, said the new scheme would prove unworkable in many outlying places in the Union, which he enumerated, because there was no resident chemist. In cases of urgency they must not consider so much the cost as the life of the patient, and in such instances he felt that the authority to supply expensive medicines should be left in the hands of the medical staff. In the course of the discussion which followed, Mr. Edward Davies asked if medical men carried these expensive medicines in their pockets when they went to outlying districts; he supposed they had to return home to dispense their prescriptions. Dr. D. Ll. Davies, medical officer for Neath, said that, as a matter of fact, doctors when visiting such places did carry medicines with them, and dispensed on the spot. Mr. Isaac Evans said that, judging from his experience, medical men charged as much for cheap medicines as they did for the dearer ones. (Laughter.) Mr. Rees Thomas thought if the doctors charged the same as the chemist the change might be acceptable. Mr. Wm. Howell pointed out that the proposal to give these orders to the local chemists followed as a recommendation from the Finance Committee, and this was made in consequence of the charges of the medical men. He instanced a case of a charge made by Dr. Davies, of Taibach, of 15*l.* 15*s.*, payment of which was resisted; and the matter came under the notice of the Local Government Board, and three months after the rejection of the account a fresh bill was sent in for 5*l.* The Clerk said the case was not analogous, it being for an operation performed. Mr. Howell, resuming, said he understood that Dr. Davies meant to fight out this issue with the Board, and he wanted to know whether the Board was to rule or the medical staff. This attempt to disturb the resolution was an affront to the Finance Committee, and he thought the Board should stand by it for six months, and then, if found unworkable, they might consider its rescission. (Hear, hear.) Mr. Bircham, inspector to the Local Government Board, said they should not tie the hands of the doctor; in a case of emergency the medical staff should fully understand they were to act. Ultimately the resolution was allowed to stand, but with the following addition: "Except where no chemist lives in the immediate district, and in cases of emergency."

Preferred the Chemist to the Elephant.

At Weymouth, last week, a horse drawing a landau was being driven down the street when an elephant belonging to

Mr. Bostock's wild-beast show was met. The elephant was covered with a scarlet cloth and had a rider on its back. The horse was frightened, and suddenly swerved and dashed its head through one of the plate-glass windows of Mr. E. M. Smith's chemist's shop, destroying a quantity of scents and other valuable goods in the window. The carriage was not upset, and the two lady occupants escaped almost uninjured. The horse was badly cut. Mr. Smith was insured against accident.

Belladonna for Senna.

A few nights ago it was found advisable to give a dose of senna to the youngest of the Harvey Boys performing at the Winter Gardens, Blackpool. An ounce-bottle had been purchased from a chemist, which greatly resembled another bottle of belladonna liniment which the elder brother was using. A dose of the latter was given before the mistake was discovered. Happily prompt medical assistance saved the boy's life.

Three Shillings for a Twopenny Mixture.

At Lambeth Police Court on July 10, Alfred Lukins (50), who described himself as a gardener, and said he had no fixed place of abode, was charged with obtaining the sum of 3s. from Oliver Alden by false pretences; also with attempting to obtain a further sum of 3s. from the same person. The prosecutor, a furniture-dealer, of Old Kent Road, said the accused entered his shop and got into conversation with him concerning his dog. The prisoner detailed his travels abroad, particularly in New Zealand, where he said he was a sheep-farmer and a breeder of dogs. He then mentioned that he knew of an excellent mixture for keeping dogs' skins in order in hot weather. Witness agreed to have a bottle, and the accused went away. He afterwards brought back a bottle of stuff, for which witness paid 3s. That, however, was with an eye to business, for the prisoner had promised to call with his wife to look at some furniture. After the defendant had gone witness smelt the bottle, and came to the conclusion that he had been taken in. He afterwards made inquiries at a neighbouring chemist's. The prisoner called about a quarter of an hour afterwards and asked for the loan of 3s. until his wife came home. Witness then gave him into custody. Edward Howard, a chemist, of Old Kent Road, said he supplied the accused with the mixture. It consisted of two pennyworth of Friar's balsam and water. Detective-sergeant Neil said the prisoner was given into his custody. He then exclaimed, "I didn't think there was any harm in it." Upon the application of the officer, Mr. Hopkins granted a remand.

Supper at Plymouth.

Mr. C. J. Park was the guest of the evening at a complimentary supper given at the Liberal Club on Wednesday, July 8, by the members of the Plymouth and District Chemists' Association. Mr. R. H. Rendle (Devonport) occupied the chair, and, after the toast of "The Queen," submitted that of "Mr. C. J. Park, our President." He congratulated him on his recent election to the Pharmaceutical Council, and spoke very highly of the good work he had done for the Plymouth Association. In responding, Mr. Park thanked the members one and all for their compliments and good wishes and trusted that the Plymouth Association would long flourish and have great influence. On the motion of Mr. J. G. Netting, a vote of thanks was passed to Messrs. R. F. Roper and J. H. Bailey, who had charge of the arrangements. The remainder of the evening was of a "free and easy" character.

County Council Contract for Lime.

At the meeting of the London County Council on July 14, the Main Drainage Committee reported on the tenders referred to them for the supply of 23,000 tons of lime for precipitation-purposes at the Barking and Crossness outfall-works. Eighteen tenders had been sent in, at prices varying from 9s. 6d. to 16s. a ton, the lowest being that of Messrs. Tolhurst & Son. That firm had, however, stated in subsequent letters that they were unable to undertake the execution of the contract at the price given in their tender owing to an oversight in their calculation, and they had asked that their tender might be amended by increasing the price from 9s. 6d. to

11s. 6d. per ton. The committee felt, however, that the Council should pass over Messrs. Tolhurst's tender and accept the next lowest—viz., that of Mr. L. Sommerfeld, who was willing to supply the whole quantity, by barge or by ship at his option, at 11s. 7d. per ton. Mr. Emden asked whether Mr. Sommerfeld's firm was not a Belgian one, or whether the lime was not to come from there. Mr. Cornwall, chairman of the committee, replied that although the firm was a Belgian one they had a London office. They were prepared to supply either Belgian or English lime. Mr. Emden opposed the recommendation, and the consideration of the matter was adjourned for a week.

A Chemist Scorchers.

Sidney Parsons (17), a chemist's assistant, was fined 2s. 6d. at Cambridge Police Court last week for furiously riding a bicycle.

Obtaining Credit Easily.

A man named Arthur Matthews was charged at the Nottingham Police Court, on July 10, with obtaining goods by false pretences under what is known as the long-firm system. The evidence showed that the prisoner had obtained 12l. worth of screw bottle-stoppers from Messrs. Barnett & Foster; soluble essence of lemon and citric acid, to the value of about 20l., from Baake, Roberts & Co., of Stratford; about 8l. worth of phosphoric acid from Messrs. Hassall & Co., of Stratford; some ginger wine from Messrs. Kops, of Fulham; and gas-brackets, to the value of 6l. 15s. 6d., from Messrs. Harris & Sheldon, shop-fitters, Birmingham. Proof of the sale of some of these goods was extracted from a reluctant witness, and evidence was given that the prisoner lived in a small house in the village of Beeston, worth 3s. or 4s. a week. Dr. Trueman, who defended Matthews, urged that there was not the slightest atom of representation or pretence made by prisoner that he was a merchant in a large way. The Bench had seen every scrap of paper which the vigilant superintendent could find. The only thing upon which the prosecution relied was the fact that Matthews had a printed heading to his paper. Both the name and address were genuine. If firms chose to give credit in the way stated, he thought the Bench would agree with him that they had only got what they deserved. To say that they believed or that they were entitled to infer from the name and address that prisoner was a merchant was idle.

Prisoner was committed to take his trial at the Assizes, bail being allowed, himself in 50l. and two sureties of 50l. each.

Celebrating their Prosperity.

Messrs. Beecham's employes had an excursion last Saturday to Blackpool.

The male staff of Messrs. Evans, Gadd & Co., wholesale druggists, of Exeter, had their annual outing on Saturday week, Ashburton and the surrounding picturesque district on the borders of Dartmoor being visited. A party of between sixty and seventy, including the principals of the firm, left St. David's Station by the 8.40 train, in special carriages. Arriving at Ashburton luncheon was partaken of at the Golden Lion, after which a delightful drive was made through Holme Chase and back by way of Buckland. At 3 P.M. the Golden Lion was again reached, and a good dinner was served. Speeches followed, among which the toast of "Success to the Firm" was cordially received, and was acknowledged by Mr. Alderman H. Gadd, J.P., Mr. H. J. Wippell, Mr. H. Gadd, jun., and Mr. Sidney Gadd. Admiral White, C.B., responded to the toast of "The Visitors." On the way home the party visited Teignmouth and Dawlish. The female employes had a day to themselves.

Last Saturday the employes of Mr. James Townsend, medical-label printer, of Exeter, found their way to Cardiff. One portion of the party travelled to Weston-super-Mare by special train and thence by steamer to Cardiff, while the other section proceeded *via* the Severn Tunnel. An excellent dinner was served at the Park Hotel, the chair being occupied by the principal of the firm (Mr. James Townsend) and the vice-chairs by Mr. W. Townsend and Mr. T. J. Taylor (the senior representative). Among the speeches after dinner Mr. Blackmore gave the toast of "Our Worthy Employer and Family," making reference to the kindly

interest which Mr. Townsend took in the employés. He described him as the pioneer of shorter hours and increased wages, and also adverted to the new departure this year of employés of over ten years' standing being given a week's holiday. Mr. Townsend suitably responded, and Mr. W. Townsend replied to another toast wishing the firm prosperity.

The annual outing of the employés of the firm of Evans, Lescher & Webb, wholesale druggists, Partholomew Close, E.C., took place on July 11, at Green's Hotel, Hastings. The visit to the town was somewhat curtailed by the great delay in the journey down, the party only arriving a short time before dinner. After doing justice to the spread a number of speeches were made. Mr. Edward Lescher was in the chair and responded to the toast of "The Firm," given by the vice-chairman, Mr. C. Francis. Mr. J. Grimditch proposed "The Travellers," for whom Mr. E. J. Hill responded. The rest of the day was spent in excursions or on the sea.

We fear that the Shade of the great Lexicographer which presides as a sort of tutelary genius over the house of Newbery shook its ghostly wig in astonishment at the liberties taken with the English language when it read an invitation-card announcing that

FRANCIS NEWBERY & SONS,
Will celebrate y^e
150TH ANNAVERSARIE

of y^e Foundacionn of y^e ancienne Firme so fer awaye backe as y^e year 1746, by a myere Trippie awaye nyppie y^e old Ryvere "Faire Thames," aboarde y^e goode Schip y-clipp'd y^e "Duke of York," stertyng from y^e Pier att^y Richmond, att^y y^e houre of 9.30 byfore noone on Saturday, July 11th, 1896, whanne y^e plesauce of y^e Compaignye of Mr. Editor is besoughte by y^e Mastere ARTHUR L. NEWBERY and y^e Mastere LIONEL NEWBERY.

Undeterred by the ghost, which is a kindly and genial one withal, "Mr. Editor" went, and spent a pleasant day on the old river that lay glimmering as joyously under the bright July sun as it has done at any time since the original John Newbery first took to selling books under the shadow of Wren's dome. The company included, besides the Messrs. Arthur L. and Lionel Newbery, two sons of the last-named, several ladies and relatives of the Newbery family, Mr. Pickering, the manager, and a full muster of the travellers and employés. Dinner was served on board, and by half-past 3 the *Duke of York* had reached Staines, the end of the journey. Songs and piano-play enlivened its progress. Mr. S. E. Shotter sang, and Mr. Pickering, who recited Mark Twain's story of the guide at Genoa, demonstrated the perfection with which he would be able, should occasion require, to pass himself off for a Down-East Yankee of the most nasal type or an English-murdering Italian. Mr. Wightwick performed a cornet solo, and Messrs. Day, Turner, W. S. Darby, and E. G. Walker also contributed to the musical programme. On the way back Messrs. Arthur and Lionel Newbery both addressed the gathering, expressing their gratification at the good feeling which had always characterised the relations of the heads and the employés of the business. A surprise was then sprung upon the two principal partners in the firm by the presentation to each of them of a copy of the following address, beautifully illuminated:—

MESSIEURS FRANCIS NEWBERY & SONS
(Arthur le Blanc Newbery, Esq.,
Lionel Newbery, Esq.),

Your Employés now joyously celebrating the
150TH YEAR

of the Establishment of your Business, desire to offer their
hearty Congratulations on this the
3rd Jubilee

of the Firm's existence. They earnestly hope that continued prosperity may, by the good Providence of the Giver of all Good, attend you and yours for generations yet to come.
Richmond, July 11th, 1896.

The address was presented by Mr. Edward Pickering, and after expressions of gratitude and thanks by the two chief partners and by Mr. Francis Newbery (the second son of Mr. L. Newbery and the only one now bearing the name of the founder of the house), several employés, including Mr. W. J. Adkin, sen., Mr. J. Shotter, Mr. T. G. Hards, the town representative, and Mr. E. Gage, who has been thirty-four years with the firm, joined in expressing their loyalty and good feelings towards the old house. Dr. Penniman, of the

Trommer Malt Company, replied on behalf of the visitors, and by 9 o'clock the party returned to Richmond, tired, sunburnt, and happy.

Chemists at Cricket.

The annual cricket match between teams representing the wholesale and retail departments of Messrs. Reynolds & Branson was played at Kirkstall on July 6 and 7. The game ended in a victory for the retail by 35 runs: retail, 64; wholesale, 29. W. A. Fox and J. Challoner were top scorers for the retail, whilst H. Goodson and G. Lazenby did best for the wholesale.

A match was played last Saturday at Neasden between the teams of Messrs. Harker, Sagg & Morgan and their neighbours, Messrs. G. Harker & Co., the wholesale grocers of Upper Thames Street, resulting in a victory for the former. The scores were: H., S. & M., 141; G. H. & Co., 126.

The Bolland C.C. (Hodgkinsons, Treacher & Clarke) played Davy, Yates & Hick's C.C., at Tottenham, on July 11, and won by 22 runs. For the winners J. W. Watkin scored 26, and E. Shirley bowled 8 wickets for 14 runs. For D., Y. & H. Patey scored 21. Scores, 70 and 48.

The return match was played on Saturday last between Barron Harvey C.C. and May & Baker C.C., on the ground of the former, at Nunhead, resulting in a win for the B.H.C.C. by 25 runs. The scores were:—B.H.C.C., 101 (A. Halson 39, Stuckbury 16, Berry 11, not out); M. & B. C.C., 76 (Arnold 18, Andrews 13, Horsley 14, Umberstone 10). For the winners G. A. Grant bowled well, taking 4 wickets for 38 runs, and McLennan 2 wickets for no runs.

A Chemist's Suicide.

A sensation was created at the end of last week in the village of Ramsbury, East Wilts, by the suicide of a chemist and druggist named Robert Kirkby, who on Thursday took prussic acid, he being the second chemist who has committed suicide in the same shop during the past eighteen months. From the evidence taken at the inquiry before Mr. Coroner Browne on Friday, it appeared that the deceased was manager of a business for Mr. Gantlett, and came from the North of England. He was married, and 45 years of age, with four children, and was highly respected in the village, where he had taken part in all movements for the good of the parishioners. He was a faithful servant, and on the best of terms with his employer, from whom he was about to purchase the business. On Thursday morning he rose at an early hour, telling his wife he intended to go for a walk before opening the shop. Later she found him lying senseless in the kitchen, he having taken a dose of prussic acid, from which he died. On the shop-counter was found a piece of paper bearing the words, "Can't stand the pressure. Good-bye. R. K." The jury returned a verdict of suicide whilst temporarily insane.

The Liverpool Meeting of the B.P.C.

We have received the following additional items of information in reference to the forthcoming meeting of the Pharmaceutical Conference at Liverpool:—

The luncheon on Thursday, July 20, will be held in the Town Hall at Chester, and the Mayor of Chester will attend.

Mr. Michael Carteighe will preside at the smoking-concert at the Adelphi Hotel on Wednesday evening, July 23.

The Committee of the Lyceum, in Bold Street, have consented to allow members of the Conference to use their news-room during their stay in the city.

A Fight over Syphons.

Messrs. E. Gerant & Co., mineral-water manufacturers, are at issue with the Holborn Board of Guardians with respect to a number of syphons which they say they have supplied waters in and have not had returned. The dispute concerns between 200 and 300 syphons. The guardians do not admit receiving the syphons; and, if they have, they declare that they must have been sent back, because there is no trace of them in the City Road Workhouse (where it is alleged they were delivered), and no report as to their having been broken. A mass of correspondence has taken place between Messrs. Gerant and the guardians, and the matter came before the board on Wednesday, when the

Clark reported another letter from Messrs. Geraut, stating that they feel that their case is so strong as to the non-return of syphons that they will have to go to law unless their claim is satisfied. They said their claim is on thorough business lines, and appealed to the guardians to pay the account, and thus save the unpleasantness of proceedings. They added that if they allowed such losses to go unchallenged they would not be able to meet their liabilities. Mr. Jones, Chairman of the City Road Workhouse Committee, remarked that Messrs. Geraut said nothing about the syphons until they lost the contract for the supply of minerals, and then they put in this heavy claim. Mr. Langley said Messrs. Geraut should have made up their accounts yearly, if not half-yearly. In the course of the discussion, Mr. Walton said he thought that, as business men, they would see the necessity of paying for the empties they could not return. Whilst the supply was going on they were not particular on either side as to the exact returns, but when it was finished they had to balance accounts. If Messrs. Geraut took the matter into a court of law the guardians were bound to lose. Ultimately the guardians decided to receive the letter, and allow Messrs. Geraut to go to law if they please, as the master of the workhouse assured them that he had never heard of any breakages or losses of syphons.

Fires.

Late on the evening of July 5 a fire was discovered in the cellar underneath the business premises of Mr. Horace R. M. Forster, chemist and druggist, St. Margaret's Banks, Rochester. The police and members of the Rochester Volunteer Fire Brigade were quickly on the scene, and in a short time extinguished the flames.

A fire which might have been serious occurred on Tuesday evening last at the shop of Mr. J. Hinton Lake, chemist, of High Street, Exeter. A quantity of camphorated oil which was in a vessel close to a gas-jet became ignited, and in turn set fire to the counter on which it was standing. The shop was filled with smoke, and the body of flame was considerable. Steps were at once taken by those in the shop to check the outbreak, and assistance from outside was also promptly rendered. The fire had been extinguished before the arrival of the fire brigade.

Chemists' Club.

Mr. William Pennack, Chairman of the Sunday Outing Committee, asks us to state that a four-in-hand will leave the Chemists' Club at 9.30 for Weybridge, *via* Putney Bridge, on Sunday next, July 19. Tickets, including drive, dinner, and tea at the Ship Hotel, 7s. 6d. each. Application should be made to the Chemists' Club, 2 Farringdon Avenue.

Carbolic-acid Poisonings.

Other poisonings by carbolic acid reported during the week are mentioned below.

George Easton (64), a retired commercial clerk living near Victoria Park, who had been in bad health for some time.

Elizabeth McCabe (32), the wife of an engineer's labourer at Liverpool, who had recently been drinking heavily.

On Monday, James Coggin (17), of Blackburn, drank some carbolic-acid lotion from a beer-bottle, and died.

Ann Smithson, widow (60), of Padgate, near Warrington, who took the poison in mistake. The Coroner said the relatives were to blame for leaving the acid among the medicine-bottles.

Mr. Edw. Roberts, builder and slater, of Cefn Mawr, on Monday evening took a drink out of a bottle which he thought contained herb-beer, but which contained carbolic acid. He died a few minutes afterwards, suffering terrible agony.

At Manchester, last Saturday evening, a postman, named Wm. Hubbard (30), committed suicide by taking carbolic acid. Ten minutes prior to taking the stuff he had been seen and spoken to by a manufacturing chemist, named Wm. Drabble. The red bottle containing the liquid had been purchased at a local chemist's, and was labelled "Poison." It had also a peculiar shape, somewhat resembling a coffin. Mr. Drabble, who was called to the spot immediately after the deceased's condition was discovered, administered an emetic of salt and water, but said that if he had known the deceased had swallowed carbolic acid he should not

have done so—he would have given oil. At the inquest on Monday a juror said there ought to be restrictions on the sale of carbolic acid. The Coroner (Mr. S. Smelt): There ought, but there are none. It is because there are no restrictions that it is adopted for so many suicides. Children, too, drink it out of bottles. It is often kept among ginger-beer bottles, &c., and children drink it by mistake. Dr. Reynolds said it was wrong to give an emetic to a person suffering from carbolic-acid poisoning. The effect would only be to irritate the patient. It might cause him to vomit pieces of his stomach. The Coroner: What is the best antidote? Dr. Reynolds: Oil and lime-water. A Juror: Is the chemist who supplied the acid here? The Coroner: No; he was not obliged to come. He says he cannot remember supplying the deceased with the acid, and could not identify him. A Juror: There ought to be some restriction on the sale of it. The Coroner: It is possible there may be some restrictions by law, and no doubt that would prevent many suicides.

Combined Anti-cutting Agreement.

The following is a copy of the agreement drafted and approved by the Council of the Proprietary Articles Trade Association, which came into force on Wednesday, July 15:—

I WE undertake not to sell any of the goods named below under the stated minimum prices.

I WE agree to withhold supplies of all the under-mentioned goods from any firm named by the Secretary of the Proprietary Articles Trade Association as selling any of them below the stated prices.

I understand that no wholesale buyer will be supplied with any of these goods who does not sign and maintain this Agreement.

Size or Advertised Price	Name of Article	Minimum Wholesale Price	Minimum Retail Price
1/1½ 2/9	Barclays—Dr. Bateman's Drops	10/6 25/-	1/1½ 2/9
1/6	Condal Water	13/6	1/6
2/9 4/6	Davis's Caloric	27/- 43/-	2/9 4/6
1/6	Davis's Caloric Shields	14/6	1/6
1/1½ 2/9	Diceys—Dr. Bateman's Drops	10/6 25/-	1/1½ 2/9
2/- 2/9	Diceys—Daffy's Elixir	18/- 25/-	2/- 2/9
1/1½ 2/9	Dredge's Heal-all	10/6 25/-	1/1½ 2/9
7½d.	Frog in your Throat	5/6 31/- 60/-	7½d.
3/6 2/-	Hall's Coca Wine	27/- 15/6	3/- 1/9
1/3 2/-	Invalid Bovril	11/- 19/-	1/3 2/-
1/1½ 2/9	Mrs. Johnson's American Soothing Syrup	10/6 25/-	1/1½ 2/9
1/1½ 2/9	Lambert's Balsam	10/- 27/-	1/- 2/9
3/6 2/3	Liebig's Extract of Meat and Mat Wine (Key-stone Brand)	30/- 17/-	3/3 2/-
1/- 1/9 3/3	Peptarnis (Liebig Co.'s Peptone of Beef)	9/6 17/- 33/- in 5/ lots	1/- 1/9 3/3
1/1½ 2/9	Dr. Scott's Bilious and Liver Pills	9/3 16/6 32/-	1/- 2/6
		10/- 24/-	

Then follow spaces for the signature and address of the person agreeing.

Davy-Faraday Research Laboratory.

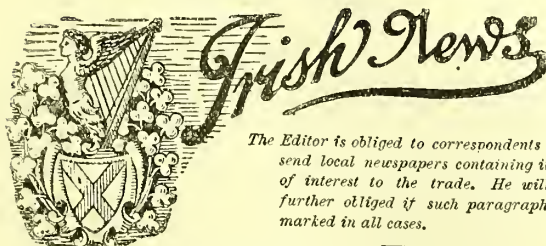
Dr. Ludwig Mond, F.R.S., has formally transferred to the managers of the Royal Institution the freehold of 20 Albemarle Street, for the purpose of a laboratory of research to be known by the above name. Dr. Mond has equipped the laboratory with the necessary apparatus, appliances, &c., for carrying on delicate investigations in physical and chemical science. The Laboratory contains:—On the basement: A room for thermochemical research; a room for pyrochemical research; mechanics' workshop; room for electrical work; battery of twenty-six accumulators; constant temperature vaults; boiler-house and store-rooms. On the ground floor: A room for research in organic chemistry; a room for research in inorganic chemistry; a fire-proof room for experiments in sealed tubes; a balance room; entrance hall and cloak-room. On the first floor: The Honorary Secretary's room; a large double library connected with the library of the Royal Institution. On the second floor: A museum of apparatus. On the third floor: Seven rooms for research

in physical chemistry. On the fourth floor: A room for inorganic preparations; a room for organic preparations; a photographic room; four rooms for researches in physical chemistry. On the roof: An asphalted flat with a table, gas and water. The directors of the Laboratory will be Lord Rayleigh and Prof. Dewar. It is intended to begin work middle of October. The trust deed provides that no person shall be admitted to the laboratory as a worker who has not already done original scientific work, or in the alternative, who is not, in the opinion of the Laboratory Committee, fully qualified to undertake original scientific research in pure or physical chemistry; and that no person shall be excluded from admission by reason of his or her nationality or sex. Admission to the laboratory, and the supply of gas, water, and electricity, as far as available, will be free of charge. Applications for admission are to be made to Mr. Robert L. Mond, Honorary Secretary to the Laboratory Committee, at 20 Albemarle Street.

Plymouth and District Chemists' Association.

The quarterly meeting of this Association was held at the Foresters' Hall, Plymouth, on Wednesday last. There was a good attendance, and Mr. C. J. Park (President) was in the chair. The Hon. Secretary (Mr. James Cocks) having read the minutes of the meetings held during the quarter, the scheme for a course of education for students during apprenticeship was considered, and a committee, consisting of Messrs. James Cocks, E. A. Hodge, J. R. Johnson, and H. Woods, was appointed. It was agreed to continue connection with the Federation of Local Pharmaceutical Associations, Mr. C. J. Park being appointed as delegate to attend the forthcoming annual meeting at Liverpool. The Plymouth Association strongly supported the resolutions on the Federation agenda-paper in favour of Sir J. Lubbock's Early-closing Bill and Lord Herschell's amendment to the Companies Bill, the clause to be retrospective. A scheme for the interchange of unsaleable articles in stock was brought forward by Mr. Cocks. He explained that chemists often found proprietary articles and out-of-the-way commodities left on hand, while another chemist in the district would have a demand for such. He proposed to have an exchange column fixed up in the rooms of the Association, where chemists could see what was to be disposed of. The idea received the support of Messrs. G. Breeze, R. H. Rendle, and many present, and it was agreed to adopt it. The question of commemorating the election of the President (Mr. Park) on the Pharmaceutical Council by presenting a sum of 10*l.* to the member of the junior section who should win the Bell Scholarship caused much discussion, and the subject was eventually adjourned to a future meeting. On the motion of Mr. J. G. Netting (Plymouth), a resolution was unanimously adopted expressing

The sincere and hearty thanks of the Association to Mr. Michael Carteghe for his great services to the chemists of the country, and for his unparalleled efforts during his fourteen years Presidency of the Pharmaceutical Society for the advancement of pharmacy, and trust that he will long retain those interests.



The Editor is obliged to correspondents who send local newspapers containing items of interest to the trade. He will be further obliged if such paragraphs be marked in all cases.

Pharmaceutical Society of Ireland.

The following have passed the Preliminary examination:—Messrs. A. Elliott (W. M. Crofton and N. V. MacDowell equal), W. A. Berry, S. J. Clotworthy, W. E. Stevenson, M. J. Kennelly (D. Barrett and G. W. J. Hawthorne equal), W. Herron, C. F. Fairweather, J. H. Davis. Fourteen candidates were rejected.

The following have passed the Pharmaceutical Licence examination:—Messrs. R. McK. Wilkin (R. Andrew and E.

Byrne equal), H. O'Connor, W. V. Johnston, J. B. Morris, J. Glendinning, C. E. Price, J. J. Fitzsimons. Ten candidates were rejected.

To Appear at Liverpool.

The delegates of the Pharmaceutical Society of Ireland to the British Pharmaceutical Conference at Liverpool are the President (Mr. Wells), the Hon. Treasurer (Mr. Beggs), Messrs. Hayes, Conyngham, and Kelly, members of the Council, and Mr. J. W. Robinson, M.P.S.I.

Pharmaceutical Appointments.

The Local Government Board has sanctioned the appointment of a pharmaceutical chemist for the Union of Croom, at a salary of 30*l.* per annum.

Mr. James Millwood, late of Messrs. Kiloh & Co.'s pharmacy, Cork, has been appointed, out of a large number of candidates, to the position of examiner in the Naval Chemical Department of New York.

Mr. E. M. McSwiney, L.P.S.I., who has been discharging as *locum-tenens* the duty of compounder to the Cork Dispensary Committee, has been appointed permanently to the vacancy caused through the resignation of Mr. Hanrahan, L.P.S.I.

The Striker Struck.

A peculiar state of affairs has risen in connection with the apothecaryship at Clonmel Workhouse. Recently the chemist, Mr. Harvey, applied for an increase of salary, which the Local Government Board refused to grant. He threatened to resign if he were not allowed to conduct a medical hall as a supplement to his salary. The Board accepted this as his resignation and refused to withdraw the same. The post was declared vacant and the salary reduced to 40*l.* per annum, with the option of the man appointed keeping a pharmacy in the town. Mr. Harvey became a candidate, but was defeated on the day of election by Mr. Eaton, formerly apothecary to the Coombe Hospital, Dublin, and proprietor of the Medical Hall in the town. The voting was 19 for Mr. Eaton, and 7 for Mr. Harvey.

French News.

(From our Paris Correspondent.)

DENATURATION OF ALCOHOL.—The French Minister of Finances has formed a commission to study the various questions relative to the denaturation of alcohol, of which M. Duclaux, Director of the Pasteur Institute, has been named a member. A further object of the commission is to organise in the chemical laboratories attached to the Ministry of Finances the best methods for the analyses of alcohols and sugar.

A FIRE, which rapidly assumed dangerous proportions, broke out at 11 o'clock on Thursday night of last week in the extensive warehouses of MM. Berthier & Maurial, Lyons. The watchman was aroused by the explosion of liquids, and had difficulty in rescuing his wife and children. Five blocks of buildings were destroyed. The material damage is very extensive, and a fireman was seriously injured by a tile falling on his head.

VICHY SALTS—At the instance of a pharmacien, M. Lavergne, the Vichy Mineral Water Company was summoned recently at Paris for illegal practice of pharmacy resulting from the sale of Vichy salts and pastils. The company was fined 500*fr.* (20*l.*) and the same amount for damages, the Magistrate having decided that "the Vichy salts and pastils are exclusively medicinal compositions of which the preparation and sale are entirely reserved to pharmacists." The shop opened by the company for the sale of these preparations, 8 Boulevard Montmartre, was ordered to be closed. It is probable that the Vichy Company will appeal against this finding.

THE ANNUAL PHARMACEUTICAL CONGRESS, under the auspices of the General Association of the Pharmacists of France, was held on Saturday and Sunday last at Rouen, M. Petit presiding. The exhibition now being held in the Norman capital was the cause of its being selected for the meeting. The most important discussion that arose was in

connection with the speciality question, the provincial delegates being in favour of the total suppression of specialities, while those from Paris were opposed to such a radical measure. The Congress failed to arrive at a satisfactory understanding, although, in view of the opinion recently given by an eminent harrister, M. Bétolaud, regarding the means for obliging pharmacists to sell at marked prices, there is still hope that an arrangement may be made. A banquet was held at the termination of the meetings of the Congress.

IN MEMORY OF PASTEUR.—The Conseil d'Arrondissement of Versailles has initiated a popular subscription for a monument to Pasteur, the amounts being limited to one franc. A circular has been addressed to the Councils of all the other districts of France which terminates as follows:—"The entire world is grateful to Pasteur for his discoveries, a witness to which is the Institute erected by public subscription that bears his name. A monument to perpetuate his memory is missing; it must be on a level with the glory that spreads around the name of Pasteur. At his death the small post-office of Garches was inundated with telegrams of condolences from the four quarters of the globe. Pasteur belongs to humanity, and on the monument to be raised to him must be engraved: 'To Pasteur, erected by grateful humanity.' The lists of subscribers will be bound and presented to the Pasteur Institute after the inauguration of the statue." On Saturday the Municipal Council of Lille selected the design of a statue that is to be erected to Pasteur on the Place Philippe le Bon of that town, which is in the centre of the University Quarter. The sculptor is M. Cordonnier, and the statue will cost 60,000fr. (2,400*l.*), collected by public subscription.

Foreign and Colonial News.

AMERICAN SARSAPARILLA-LITIGATION.—G. C. Kilgore and others recently appealed to the Supreme Court, at Boston, U.S.A., against a decision given by the lower Court in a sarsaparilla company's stock-action in favour of the Hon. Geo. A. Bruce, the defendant. The action was brought to recover upon promissory notes amounting to \$10,000, given in part payment for shares of stock in the Dana Sarsaparilla Company. Kilgore held all the stock on option, and was negotiating a sale. He represented to the defendant that shares had been sold to James E. Whitney and Charles A. West at \$1,400 each, at which he agreed to let the defendant have fifty. Afterwards it came to the defendant's knowledge that Kilgore had sold sixty-one shares to Whitney at \$1,221 a share, and he refused to pay the two notes sued for. The Court upheld the decision of the lower tribunal.

A CAPE TOWN BANKRUPT.—The trustees of Harry Glover, chemist, Cape Town, bankrupt, have reported that the liabilities were 227*l.* 5*s.* 1*d.*, of which 212*l.* 5*s.* 7*d.* had been proved. The preferential claims amounted to 36*l.*, and the assets in furniture to 111*l.* 7*s.* The life-policy had a surrender-value of 70*l.* 16*s.* 3*d.*, against which was charged 54*l.* 6*s.* 6*d.* for an advance, fines, and premium, and the trustees were advised that it was not available for creditors. The wife of the insolvent, from whom he had been judicially separated, had applied for personal effects and furniture, and offered to take over the balance of the furniture for 65*l.* Insolvent asked that his personal and business effects and bedroom furniture might be given him. The trustee proposed that if an offer of 111*l.* were made, less the valuation of anything the creditors might give the insolvent and his wife, it should be accepted. It was decided to adopt the report and leave the management of the estate and the question of the allowances to the insolvent and his wife to the trustee—the insolvent not to be allowed any furniture.

WOMEN-DOCTORS IN A MELBOURNE HOSPITAL.—"Let no devil of a woman come near me!" Mr. Cecil Rhodes is reported to have observed when, regaining consciousness after a recent accident, he found himself helplessly in the hands of doctor and nurse. That the African Napoleon's antipathy to medical women is shared by many of his countrymen, and still more of his countrywomen, is shown by the consternation that prevailed in the Melbourne Hospital

when it was announced that women-doctors would be appointed at that institution. The women-patients rose in revolt at the announcement, while in the male wards, according to a *Melbourne Argus* reporter, "a foreign sailor, speaking only broken English, when interviewed on the subject, explained, with pathetic vehemence of gesture, that he would never consent to be treated by a woman; and an English patient in an adjacent bed declared that he would leave the hospital rather than submit himself to the attendance of a female practitioner. As he lay in his bed, with white face and features drawn with suffering, there was no mistaking the sincerity of his protest against the proposal to hand him over to a medical attendant who, to use his own words, could not possibly deal with his complaint, and would simply make him worse by interference with him."

Marriages.

DURNO—NISBET.—On June 2, at All Saints' Church, Brisbane, by the Rev. T. Jones, Alexander Emslie Durno, pharmaceutical chemist, Market Street, Sydney, fourth son of John Durno, Aberdeenshire, Scotland, to Jeannie Marshall Nisbet, only daughter of Alexander Nisbet, Kenmore, and late of Dnnfermline, Scotland.

HAMBROOK—HOGBEN.—On July 9, at Snargate Street Wesleyan Church, Dover, by the Rev. Walter J. Elvy, Edward Odden Hambrook, son of Mr. J. B. Hambrook, chemist and druggist, of Strand Street, Dover, to Jane (Jeannie), second daughter of Mr. R. Hogben, of Watercress Farm, Lyminge, Kent. No cards.

JEWSON—PITAM.—On July 7, at St. Michael's Church, Northampton, by the Rev. A. H. Snowden, Mr. Wm. Jewson, chemist and druggist, Nottingham, to Miss Ada Pittam, daughter of Mr. E. Pittam, of 177 Brockhall Parade, Northampton.

Deaths.

GALLARD.—On July 3, at St. Paul's Road, Northampton, Mr. Richard Gallard, son of Mr. Richard Gallard, for many years in business at Towcester as a chemist and druggist. The deceased gentleman, who was 82 years of age, was, like his father, a generous benefactor to the Baptist cause.

REED.—An inquest was held at the Royal Infirmary, Newcastle-on-Tyne, on July 11, respecting the death of Mr. Johnson Reed, chemist and druggist. While walking up Westgate Hill on the previous Thursday evening the deceased, who was an elderly man, became suddenly ill, and he was taken to the Infirmary, where death ensued the following night. The jury returned a verdict that the man died from some natural cause, this being in their opinion, apoplexy.

New Books.

Benton, F. *The Honey Bee: A Manual of Instruction in Apiculture.* Illustrated. (Washington, U.S.A., and Sampson Low, London.)

Clowes, F., and Coleman, J. B. *Elementary Practical Chemistry and Qualitative Analysis.* 8vo. Pp. xiv and 221. Cloth. 3*s.* 6*d.* (J. & A. Churchill.)

Dubhring, L. A. *Cutaneous Medicine: A Systematic Treatise on Diseases of the Skin.* Part I. Illustrated. 8vo. 10*s.* 6*d.* (Philadelphia, U.S.A., and Sampson Low, London.)

Lehne, Dr. A. *Tabular Survey of the Artificial Organic Colouring Matters, and their Application in Dyeing and Calico Printing.* Translated by T. K. Gajjar. 2nd Part, 4to. Pp. 30. Sewed. 6*s.* net. (A. J. Combridge.)

Step, E. *Wayside and Woodland Blossoms: a Guide to British Wild-flowers for the Country Rambler.* 2nd series. Coloured illustrations of 150 species. Plates of 23 species. Deco. of 325 species. 12mo. Pp. 183. 7*s.* 6*d.* (Warne.)

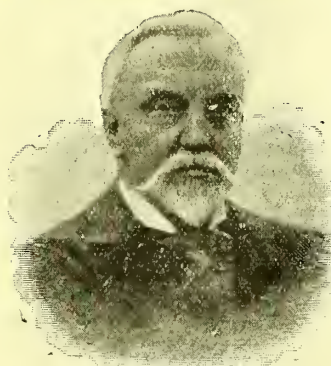
Sturmy, Ed. H. *Photography Annual: A Compendium of Information. A Record of Progress for the past year.* 8vo. Pp. 608. 3*s.* 6*d.* net. Sewed, 2*s.* 6*d.* net. (Hiffe.)

Thompson, S. *A Dictionary of Domestic Medicine and Household Surgery.* Revised by J. C. Steele and G. Reid. Woodcuts. Diagrams. 31st edit. 8vo. Pp. 752. 10*s.* 6*d.* (Griffin.)

Society of Chemical Industry.

ANNUAL MEETING.

ONCE more the members of this Society have foregathered in the metropolis. The meeting commenced on Wednesday with between two and three hours' business, followed by three days' enjoyment—so far as the broken-down weather will permit. Mr. Thomas Tyrer, F.I.C., F.C.S., is the President of the year, and the Carpenters' Hall, Throgmorton Avenue, was the meeting-place. The hall is one of those gorgeous apartments which London city companies find necessary for their festive functions, but which are a trifle dull for a prosaic midday meeting. There seemed to be about two hundred members present when Mr. Tyrer entered the hall at 10.35 leading Mr. John Glover by the arm, and accompanied by the Master of the Carpenters' Company and Dr. E.



THE PRESIDENT.

Schunck. Amongst those whom we noticed in the meeting at that time were Messrs. David Howard, E. C. C. Stanford, E. Rider Cook (Treasurer of the Society), Alfred Preston, Joseph Preston, A. Domeier, G. B. Francis, W. F. Francis, W. A. H. Naylor, W. Watson Will, E. N. Butt, John Robbins, G. Spratt Taylor, J. C. Stead (Horner & Co.), Thomas Macfarlane (Government chemist for Canada), Henry Brunner (Liverpool), R. Forbes Carpenter, chief alkali-inspector, and his predecessor, A. E. Fletcher, F.R.S., Dr. Doremus (U.S.A.), Sir F. Abel, Sir H. Roscoe, and Colonel Gamble.

Business commenced with the Master of the Carpenters' Company giving the members a welcome, and he struggled in vain not to mention that old chestnut of Lord Beaconsfield's about the sympathy between the country's prosperity and the chemical-trade; but this enabled the President to say that, whatever the sympathy may have been at one time, Lord Beaconsfield's words were no longer true.

The minutes of last year's meeting in Leeds were read and confirmed, and Messrs. Qain and Greenaway were appointed scrutators, but not without a protest from Mr. STANFORD against this annual farce of receiving ballot-papers for what is virtually an agreed election. The PRESIDENT replied sympathetically, but explained that he was bound by the constitution.

Mr. CHARLES G. CRESSWELL, General Secretary of the Society, submitted the

REPORT OF COUNCIL.

This stated that the present number of members is 2,957, as compared with 2,895 last year. During the year 223 new members have been elected, and the loss has been 161. During the past session 92 papers have appeared in the Society's *Journal*, as compared with 85 last year. The excess of revenue over expenditure amounted to 162*l.* 3*s.* after entrance-fees (168*l.*) and life-composition fees had been placed to capital account; 361*l.* 2*s.* was spent on the Collective Index, which is now ready. The President has visited all the Sections of the Society, including New York, during his year of office, and has, in every case, been received with the utmost cordiality. The report proceeded to refer to the changes in the principal offices of the Society, and mentioned that the Council has decided to award one of the recently-instituted medals at intervals of not less than two years. It is to be given for conspicuous services rendered to applied chemistry by research, discovery, invention, or improvement in processes. The recipient need not be a

member of the Society, and may be of any nationality. The first award has been made to Mr. John Glover, inventor of the tower which bears his name, and from which chemical industry has derived enormous benefit. Sir John Evans and Dr. T. E. Thorpe selected the design and superintended the production of the medal. The report concluded with references to the publication of the *Journal* and the Society's support to the Pasteur Memorial.

Mr. HENRY BRUNNER, in moving the adoption of the report, said it was an exceedingly satisfactory one, with which Mr. CARULLA, of Darby, the seconder, agreed; but added that those who were not on the Council have no idea how much work members of the Council do.

TREASURER'S STATEMENT.

Mr. E. RIDER COOK, in submitting his statement of revenue and expenditure for 1895, said that it had been distributed in the June number of the *Journal*, so he would not go through the formality of reading it, for, he remarked, just as a nation whose annals are uninteresting is happy, so a society whose financial statement can be taken as read is happy. (Laughter.)

The statement showed that the revenue of the year amounted to 4,423*l.* 2*s.*, of which 3,315*l.* 2*s.* 7*d.* was from subscriptions, 876*l.* 13*s.* from *Journal* advertisements and sales, 28*l.* 15*s.* from Collective-index subscriptions, and 202*l.* 11*s.* 5*d.* from interest; 183*l.* from entrance and life fees was put to capital account. The expenditure was 4,261*l.* 1*s.* 9*d.*, divided into 2,801*l.* 4*s.* 6*d.* spent on the *Journal*, Collective Index 361*l.* 2*s.*, sectional expenses 283*l.* 2*s.* 10*d.*, Secretary's salary 300*l.*, donation to the Lavoisier statue 10*l.* 10*s.*, and the rest chiefly in office-expenses and the like. The Society's investments amount to 6,050*l.*, most of it in Metropolitan 3-per-cent Stock.

Mr. STANFORD, in moving a vote of thanks to Mr. Cook for his report, said: "When we see the genial presence of our Treasurer we always feel that our finances are in safe hands. I rise to ask you to thank Mr. Cook for his report. That's all he gets every year. 'Tisn't much—(laughter)—and I want you to give it unanimously and heartily." (Applause.)

Col. GAMBLE seconded the motion, which was carried with acclamation. The way was now clear for the

PRESIDENTIAL ADDRESS.

Plunging straightway into the heart of his subject Mr. TYRER referred to the work which the Council can yet do to benefit applied chemistry, indicating particularly those matters which Chambers of Commerce undertake in a measure, but which can be and have been usefully supplemented by a body of technologists. Watchfulness over patent law, trade and merchandise marks, pollution of rivers, noxious vapours, secondary education, research endowment, &c., he considered a duty which the Council must, notwithstanding the existence of commercial bodies, continue to perform, chiefly by strengthening the action of these other bodies where possible.

Before he entered upon a critical comparison of English and German technology in all its branches from technical education to the final distribution of chemicals throughout the world, the PRESIDENT gave the meeting an example of

WHAT ENGLAND CAN DO

when she chooses to put her shoulder to the wheel. This referred to the exportation of alcoholic preparations. He explained that in 1889 it was thought incongruous that British exporters of tinctures and medicinal preparations containing spirit should buy in Germany and export in bond to our colonies. A careful presentment of the matter was made to the Excise authorities, and in due course the requests were practically agreed to, so that English-made preparations can be exported without needless interferences with business, and in a month or so the manufacturer

receives a cheque for the "drawback" at duty rate per proof gallon, with an allowance for waste of 4*d.*, and another 2*d.* or 4*d.*, as the case may be, for additional expense of manufacture, &c. By permission of the Chairman of Inland Revenue he was able to give the subjoined figures prepared by the Accountant-General's Department:—

TINCTURES.

Statement of the number of proof gallons of spirit contained in tinctures exported, and on which "drawback" was allowed in the United Kingdom in the undermentioned years.

Years ended March 31	England	Scotland	Ireland	United Kingdom
	Gallons	Gallons	Gallons	Gallons
1889 (3 months)	1506	—	—	1506
1890	9715	—	—	9715
1891	13012	20	—	13032
1892	20888	7	—	20895
1893	27410	23	—	27433
1894	41962	46	—	42008
1895	38876	—	—	38876
1896	56463	—	—	56463
Total ..	209,832	96	—	209,928

Regulations similar to these were extended to the exportation of essences and perfumes, under which the authorities allow bottles so small as $\frac{1}{2}$ oz. to be exported under drawback. Certain very large perfumers have under "lock and key," so to speak, been allowed to work for exportation under drawback. But this concession is for any who take out the 10*l.* licence, and thus get duly registered. These, he considered, are real concessions on the part of a rightly jealous department of the State, and he said that if it were desired to use undenatured alcohol in manufacturing, the department would be prepared to consider the question with an open mind. But we do not grow, or obtain in Britain, cheap enough raw material for reasonable competition with Germany or Russia. Land is dear, and the agriculturist has not yet acquired the knowledge for scientifically growing potatoes, from which most of the foreign spirit is still made.

ONE POINT DESERVING OF NOTICE.

The necessity for alcohol as a solvent in the production of fine chemicals is somewhat overrated, and in Britain we are practically confined to a form of "denaturing"—viz., 10 per cent. of wood naphtha—which introduces difficulties, and to another—the further addition of mineral naphtha or petroleum, so as to insure "immiscibility" with water. As it is illegal to clean methylated spirit, its use is limited. He did not think any disadvantage would follow if a wider range of denaturing materials was allowed, as in Germany. Mr. Hugo Loretz had supplied him with a synopsis of "denaturing" authorised in Germany, viz:—

(a) A mixture of 2 parts wood naphtha, 1 part of pyridine, which is added in the proportion of 3 to 100 litres.

(b) For the preparation of alkaloids denaturing is permissible by $\frac{1}{2}$ per cent. of oil of turpentine or 0.025 per cent. of animal oil.

(c) For extraction of jalap and scammony— $\frac{1}{2}$ per cent. of oil of turpentine.

(d) For polishers, for polish, and if used in their own manufacture— $\frac{1}{2}$ per cent. of oil of turpentine.

(e) For the production of aniline dyes—0.025 per cent. of animal oil.

(f) For chloroform, iodoform, sulphuric ether, antipyrin from acetic ether, chloral hydrate—0.025 per cent. of animal oil.

(g) For collodion, tannic acid, salicylic acid, and salicylates—10 per cent. of sulphuric ether.

(h) For white-lead, acetate of lead—0.25 per cent. animal oil.

Such "denatured" spirit is, however, not saleable, but can only be used after "special permission," which has to be applied for by the manufacturers of the respective article. Any spirit not "denatured," used as an addition to preparations, such as fruit-juices, is allowed on "exportation" in full. As regards duties, a quantity of 4.5 litres pure alcohol per head of population pays 50*n.* per 100 litres of 100-per-cent. alcohol. Any larger quantity produced has to pay

70*n.* per 100 litres of 100-per-cent. alcohol. Thus, there are two qualities as regards Excise, which are dealt with "On 'Change" in Germany. Alcohol is free of duty for exportation, and if used for technical purposes, such as vinegar-making, for medicinal, scientific, heating, polishing, cooking, or illuminating, according to special regulations of the "Bundsrath," such spirit must be worked off in bond, or "denatured" with the admixtures given above, according to the purpose. By the courtesy of Mr. A. Domeier he had copies of the German spirit-regulations, and on comparing these with the British, the President found that, broadly, we are not hampered materially, and certainly should not be any more so by our own Excise department if we produced alcohol at a price which would enable us to compete with German products.

The President then went on to contrast

GERMAN AND ENGLISH CHEMICAL INDUSTRIES,

and a large section of the middle portion of the address was devoted to the objects of the German Society for the Protection of the Interests of Chemical Industry. This Society is somewhat similar to the Society of Chemical Industry, but it takes more action respecting non-technical matters, such as State regulations, trade statistics, pension funds, and so on. Its rules, &c., are officially published after approval by the State Insurance Board. The penalties go to the sick and pension fund. Passing lightly over the scare of three years ago, as to the diseases of trades, and the attempt to revive it in the series of articles on "White Slaves of England," by R. H. Sherard, in *Pearson's Magazine*, Mr. Tyrer proceeded to show by extracts from two German books how the two countries compare. The first of these was "The Risks Run by Workers in Chemical Manufactures, Protective Measures against Accidents, and Conditions of Labour: a Critical Review of English and German Industrial Conditions, inspired by the English Parliamentary Report, 1893," by Dr. Konrad W. Jurisch, Royal Technical High School, Berlin. The first and perhaps most interesting contrast which Dr. Jurisch makes in this is in respect to British and German workmen. Dr. Jurisch himself had experience in English works, and he criticises the obstinacy and perverseness of the British workman in no measured terms, exemplifying this by his refusal to use mufflers or respirators or the "smoke" helmet, even in chlorine-works. This independence of spirit, said Mr. Tyrer, is familiar to British employers, and where the manager of a chemical-works has to aim at the production of first-class qualitative, quantitative, and economic results, he can devote little attention to enforcing regulations, so that he has to leave much to the intelligence and common sense of the worker, and here in Great Britain it is the most difficult thing possible to get men who have not ideas of their own as to how a process should be worked, whereas if they had machine-like obedience they would be better workmen, and that, it appears, is what German workers are.

ANOTHER DIFFERENCE

between British and German methods is in arrangement of works by localities. Here we have our chemical-factories at Widnes, St. Helens, Newcastle, Glasgow, Birmingham, Manchester, and London. As a consequence, the conditions of labour are fairly uniform, and absence of secrecy is promoted by this proximity of works. Dr. Jurisch remarks "that this openness is of great value to the industry as a whole, since the most enterprising may expose themselves to the risk of placing important intellectual and scientific labour at the disposal of less endowed competitors, but they increase their own reputation, influence, and consequently 'pecuniary' position." But, commented Mr. Tyrer, the quite unnecessary liberality of inspection of works by technologists from abroad is being discontinued, and not a day too soon. In Germany chemical-factories are widely scattered, from East Prussia and Upper Silesia to the Rhineland and Alsace, from the Bavarian Alps to Bremen, Hamburg, and Stettin. In only a few districts are the factories close together—Upper Silesia, Stassfurt, Elberfeld, Frankfurt-on-Maine, and Mannheim. As most of the German factories were developed from small beginnings, generally for supplying local requirements, they produced a number of articles. One consequence is that processes are not divulged as in Britain. The patent laws probably have had great influence, being stricter in the requirement of novelty than ours, and so enforcing secrecy

as a means of self-preservation. One result of the secretive method is not only the subdivision of factories in Germany, which places difficulties in the way of men changing employments, but it has created a different relation between employer and employed—the employer knows more of his workers, and his interest is served by himself instituting social improvements without waiting for legislative compulsion. Nevertheless, German manufacturers must promote and institute benefit-societies, which are uniformly regulated by the State through the trade Associations. One result of the method is that the more deliberate and careful performance of operations conduces to their efficiency as well as to the greater safety of the workmen. And while the 1893 report of the British Commission shows that the accidents and mortality were not greater in chemical-factories than in other occupations, the statistics in Germany show a still smaller proportion of accidents, sickness, and death than in similar occupations in England. Having glanced at some of the influences which brought about legislative regulation of factory labour in Germany, and the tendency, now fast settling down to actual accomplishment, of shortening the hours of labour, Mr. Tyrer said that the labour-rate is proportionately higher, being the same and gradually increasing for the shorter hours. The change here is and must be gradual, since, if shorter hours mean higher wages *pro rata*, competition becomes one-sided. There must be time for the introduction of mechanical and other economies tending to equalise commercial conditions. Thus, an equalising force is everywhere at work which may more speedily than some imagine make the difference in conditions between England and the Continent less acute. Dr. Jurisch observes that long hours prevailed in all ranks of assistants in Germany until recently, and from his own experience points out the destructive effects of these long hours upon "scientific imagination," the tendency being the crippling of intellectual faculties, through an unnecessary condition of bodily fatigue, practically for the sake of having a condition of military discipline, and he ventures the remark "that the habit of whiling away time during the course of the long days of labour, as a consequence of this fatigue, constitutes a 'veritable cancer' in German industries." He quotes the experience of Messrs. Brunner, Mond & Co. to show the beneficial effect of shorter hours and more continuous and methodical work in making the cost of labour per ton the same with short as long hours. The President then referred in detail to other aspects of German labour, illustrating his remarks by statistics which cannot be usefully abstracted, but the tendency of which was to show that the differences between British and German conditions are quite as great as is generally supposed. In the alkali-trade the wages are about 50 per cent. higher in England than in Germany. The conditions of labour generally are fairly represented in Meister, Lucius & Brüning's colour-works at Höchst, where the hours are six to five, with the usual half-hour and hour for breakfast. In those branches where work is continuous the hours are from six to six, 10 per cent. extra being paid for overtime. In addition to Sundays, the great Church festivals are holidays, and men are given time to record their votes at elections. The technical director is no hard-and-fast twelve-hours' man, neither is he blindly in favour of eight hours, and he gives excellent reasons for flexibility in this matter. The daily wages at the Höchst works ranged from 0.50m. to 6m. (6d. to 6s.). At the end of 1893, 2,626 workmen were engaged, and the average daily wage per man amounted to 2.86m., made up thus:—

Rate per Diem	Number of Workers	Percentage of Total
Marks		Per Cent.
0.50 to 1.00	34	1.29
1.00 " 1.50	63	2.40
1.50 " 2.00	144	5.48
2.00 " 2.50	372	14.20
2.50 " 3.00	1,136	43.25
3.00 " 3.50	455	17.32
3.50 " 4.00	311	11.84
4.00 " 4.50	99	3.77
4.50 " 5.00	12	0.45
Total	2,625	100.00

In addition, premiums to the pension fund are paid by the

firm, which bring up the average earnings to 1,000m. (50l.) per man per annum.

THE FACT OF THE MATTER

is, he concluded, that the real cause of the progress and prosperity of German chemical industries is to be found in the superior qualifications of her directing minds. If the workman is more, rather than less, of a well-drilled machine, then his labour is obviously more intelligently directed. Germany does not owe her progress alone to protective tariffs, nor to the superior discipline of her workmen, but to her thorough system of education, elementary and secondary. We are weak therein, and the tale of the downfall of our industries has been told in the series of remarkable articles entitled "Made in Germany," in the *New Review*. It is Germany, Germany, all through. Germany is especially beating us in the chemical-trade. The causes are as clear as the evil. The Germans have more knowledge, and they take more pains, while all our difficulties are evidently of our own making, and would find no panacea in protection. The English drug-trade cannot endure the high dock-charges of the port of London. We have lost our "push." And why? Simply because their chemists are "ever devising new preparations." This is the great truth to bear in mind. We will not take pains, and our rivals will. They have had the start of us in education, and they are likely to hold it for many a year. Our commercial education, better now than it was, is very far from being an effective instrument for "pushing" business. How few know two languages! How few, also, know commercial geography! After referring to the lack of State encouragement of the best forms of higher education and research, Mr. Tyrer instanced what we have done in the latter branch privately, and spoke of some of the impressions which he had formed of American education and industry during his visit to the United States, incidentally speaking in warm terms of the work done by the New York Section of the Society. He then proceeded to speak in greater detail upon

BRITISH EDUCATION.

Here he referred to the various technical Colleges throughout the country, and the help which has been given to them by guilds and companies. With the resources of our wealthy country, the practicality of its people, and the public spirit of its citizens, we ought to remain very little longer in a state of educational backwardness. It is but necessary that the State shall define the need, and the steps by which that need shall be met, and then resolutely carry them out. It discovers sources of revenue for armaments to protect our trade and manufactures, which are our Empire, but it practically "shuffles the cards," when its citizens are to be trained for its maintenance and development. . . . Our polytechnics should be subsidised in all cases by the State, and their maintenance placed upon a reliable and practical basis. As to chemical training, he referred to the article on "The Education of Chemists," read and discussed in the New York Section by Dr. Duisberg, the technical manager of the great firm of Bayer & Co., of Elberfeld, reported in THE CHEMIST AND DRUGGIST of June 13. The more trenchant passages of the paper were quoted, and the President paid a compliment to pharmacy when he said, "I am quite sure we shall agree that accurate knowledge is requisite, based upon the faculty of observation, and, personally, I know no better training for a technical chemist than that for an all-round pharmacist. He must be cleanly in manipulation, accurate in judgment, ready in resource, observant in habit, and prompt in execution." Continuing, he said he did not think that the fault of British chemical industry is in the equipment of our educational institutions, although much improvement is possible and desirable, nor in the ability of our professors and teachers, nor even in the natural ability of the raw material of students; but in the inability of the capitalist, broadly speaking, to discern aright true fields for enterprise. Our commercial and scientific education is such that the capitalist does not "know a bad thing when he sees it." Hence the yards of advertisement about "nothing," the floatation of equally "nebulous" ventures, and the consequent disappointment and discouragement to British chemical enterprises.

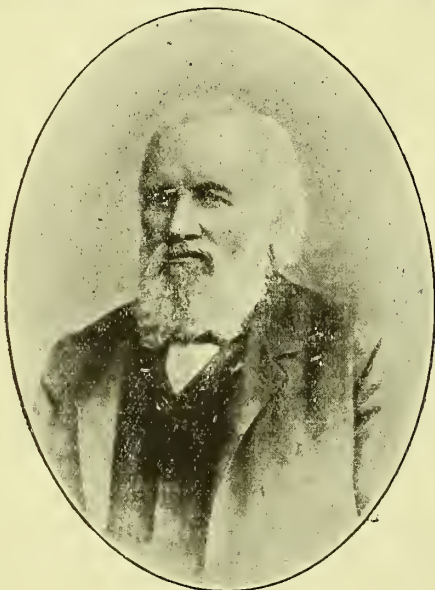
ANOTHER DIFFERENCE BETWEEN US AND GERMANY

is in the conditions of scientific employment. Here usually a man comes and goes. In Germany he stays—he must;

and whatever his industrial success, the improvements are his employer's, and rightly he, by deliberate agreement, shares in the profits thereof. Two great obstacles to the development of British chemical-manufactures are the demands for a prohibitive scale of wages, especially in the fuel-supply, and the examinalional system, which is bad, but there is considerable difficulty in eliminating it altogether. The President, having backed the latter assertion by words from American and English savants, concluded his address with some remarks on the work of the Society during the year. Without stopping he proceeded to the next part of the programme, which was the

PRESENTATION OF THE SOCIETY'S MEDAL

to the veteran Mr. John Glover, inventor of the Glover tower.



THE MEDALLIST.

In bestowing the medal the PRESIDENT said that Mr. Glover built his first tower in 1859. At that time most of the English alkali-works concentrated such of the sulphuric acid as needed concentration in badly-built lead pans, the fumes from which added greatly to the discomfort of their neighbours. Very few works possessed any apparatus for the recovery of the nitrogen compounds. According to Dr. Hürter (to whom the President was indebted for interesting particulars), in 1867 there were no works in Widnes which recovered any of the nitrogen compounds. The one immediate and great advantage of the introduction of the tower was the possibility of concentrating the chamber acid in it, so that the costly lead pans could be dispensed with. The last of these pans vanished at Gaskell, Deacon & Co.'s works in 1871. Up to 1869 there were neither Glover towers nor Gay-Lussac towers in Lancashire, but the facility with which the Glover tower permitted the concentration of the sulphuric acid for use in the Gay-Lussac, and at the same time the denitration of the Gay-Lussac acid, soon led to the rapid adoption of the Gay-Lussac tower in every works. Thus the Glover tower, being the concentrator and denitrator, enabled manufacturers to avail themselves of the Gay-Lussac tower, and in this sense we may ascribe the whole of the saving of nitrate of soda to the invention of Mr. Glover. The invention of Mr. Glover has marked an epoch in the development of the manufacture of sulphuric acid; and when we remember that the pyrites consumed in this country for the production of sulphuric acid, for alkali, manure, and sulphate of ammonia, may be roughly taken as approaching 1,000,000 tons per year, and that to-day no sulphuric-acid works are without Glover and Gay-Lussac towers, the national importance of Mr. Glover's invention will be apparent to all, even to those who are accustomed to no other measure of values than £ s. d. The saving the tower has accomplished, if we compared present-day consumption of nitre with the former practice, must be valued to this

country alone as at least 300,000% per year. Mr. Glover took no patent and no great reward from his invention, and if it was, said the President, any satisfaction for him to receive the medal in recognition by the Society of Chemical Industry of his great and valuable services to a Foundational Chemical Industry, it was no less a satisfaction to the members of the Society to hand it to him.

Mr. GLOVER now hears with difficulty, and the President, on handing him the medal, spoke the last sentence loudly in his ear. Very generous applause met Mr. Glover, and when he essayed to speak an impressive silence pervaded the hall. He said: Mr. President, Council, and Members of the Society of Chemical Industry, I need not tell you with what feelings I receive this tangible proof of your recognition of any work that I have done for chemical industry. Some one has said that good work is its own reward, but when that is received with such honour as the Society has bestowed upon me I think that it is additionally gratifying. Someone—who, I forget—has also said that everything comes to him who waits, and, although many years have gone since the tower which is known under my name was invented, I think that this medal has been well worth waiting for. I thank you from the bottom of my heart for it. This is the red-letter day of my life. I need not go into details regarding the tower; most of you know it, and those who do not know it will get in the writings of Lunge and Hürter a very good account of it. The invention, or discovery, was by no means accidental. It was in the year 1847 or 1848, when I was a chemist in Hugh Pattinson & Co.'s works, that it occurred to me that the way we took the Gay-Lussac acid and got rid of the nitrogen compounds by reducing it from 140° to 120° Twaddell, and then bringing it back again, was a very wasteful process. Of course, all the chemists of that day thought so. What I wanted to do was to see if I could break up the affinity between the nitrogen oxides and the sulphuric acid, but how was I to do it? Could it be done by heat? Well, I tried that, and found that it only increased the affinity. Then I came to the conclusion that it must be by a deoxidising atmosphere that I should accomplish the separation; and during the next ten years, when I was engaged in the design of chemical-works and other things, I worked at the matter and made laboratory experiments with the deoxidising atmosphere. Well, the results were good, but I did not expect when I applied the process on the manufacturing scale that the sulphurous acid would do anything else than remove the nitrogen oxides. It was a surprise to me that it not only did this, but helped to concentrate the acid. I may tell you that at that time many people had given up the Gay-Lussac tower because the concentration of the acid always was troublesome, and it is very pleasing to me to know that I have been the means of helping to retain that tower, and to be of some help to my fellow-man. I thank the Society of Chemical Industry once more for this honour that they have done me, and, although my tower is not so much used now as it once was, it is very pleasant to know that my name has been associated with one of the most eminent names in science—that of Gay-Lussac. Mr. Glover then resumed his seat amid renewed applause.

The PRESIDENT then intimated that the following had been elected

MEMBERS OF COUNCIL.

President.—Dr. Edward Schunck, F.R.S.

Vice-Presidents.—Professor A. K. Huntington, A. H. Mason, G. N. Stoker, and Thomas Tyrer, in addition to Chas. Dreyfus, Dr. A. Dupré, F.R.S., Thos. Fairley, Boverton Redwood, Sir H. E. Roscoe, F.R.S., E. C. C. Stanford, Dr. T. E. Thorpe, F.R.S., and Professor W. A. Tilden, F.R.S., who remain in office.

Ordinary Members of Council.—George Bellby, R. Forbes Carpenter, Oscar Guttman, and B. E. R. Newlands, in addition to R. Le Neve Foster, Douglas Herman, David Howard, C. C. Hutchinson, Ivan Levinstein, J. S. McArthur, Sir Robert Pullar, and Wm. Thorp, B.Sc.

Honorary Treasurer.—E. Rider Cook.

Honorary Foreign Secretary.—Ludwig Mond, F.R.S.

The PRESIDENT said that he was pleased to intimate officially to the members of the Society of Chemical Industry that Dr. Edward Schunck, F.R.S., would be his successor. He congratulated the Society upon the honour done to itself by the unanimous election of such a distinguished chemist. Dr. Schunck had done more for the chemistry of colours

than any other living man. Since the year 1865 he had contributed to chemical industry a very large number of papers, and no fewer than sixty were mentioned in the Royal Society's list. He felt sure that Dr. Schunck's discoveries had not ceased, and it might be that at the next annual meeting he would have another to announce. He had pleasure in introducing Dr. Schunck to the meeting.

Dr. SCHUNCK then rising, was heartily received, and said that his duty was to move a vote of thanks to the President for his address. It was not in accordance with usage to criticise such matters, but he might say, what he thought he was justified in saying, that this nation has prominently greater natural abilities than its continental competitors, and the reasons of German progress must be sought elsewhere than in that direction. Germany had beaten us, he thought, because of the greater amount of school and technical training, and that was where we have to develop. We must educate the public as to what is needed, and he felt strongly that that education of the public was urgent when they saw how many parents gave so little thought to the education of their children, so long as they learned cricket and football at school. (Hear, hear.)

Sir HENRY ROSCOE, in seconding the motion, said he did not take a pessimistic view in regard to the English chemical industry, and he congratulated the members upon the work that that Society was doing in bringing together scientific and practical chemists. When he looked back to the time when he commenced teaching, thirty years ago, he was struck with the amount of progress which had been made in England, and he thought the present prospect was encouraging. The Society, he continued, owed Mr. Tyrer thanks not only for his address, but for the interest which he had taken for many years in the Society. (Applause.) Sir Henry concluded his remarks by speaking, as the Vice-Chancellor of the London University, regarding the teaching of the University for London and the endowment of higher education, especially research.

Mr. TYRER, in responding to the vote of thanks, recalled the fact that the first publication committee of the Society consisted of five members—Sir Henry Roscoe, Mr. Davis, Mr. John Spiller, Mr. Eustace Carey, and himself—and now the committee numbers thirty. The first volume of the *Journal* was a small thing compared to the volume which they now gave every year, and when he regarded the progress that had been made during the past fourteen years, he was very confident that during the next fourteen years the Society would still progress in influence.

NEXT YEAR'S MEETING.

Mr. DAVIS, on behalf of the Manchester Section, invited the Society to hold next year's annual meeting in that city.

Dr. DREYFUS supported the invitation, and said that he hoped to show the members that the chemical industry of Manchester had not decayed since the Society had last visited it in 1887.

The invitation was accepted with unanimity.

On the motion of Mr. C. C. HUTCHINSON, seconded by Mr. T. FAIRLIE, Messrs. Miall, Wilkies & Co. were re-appointed auditors.

Sir ROBERT PULLAR, of Perth, moved, and Dr. MACFARLANE seconded, that Mr. E. Rider Cook should be representative at the Imperial Institute. Dr. Macfarlane, as a member of the Society residing in Canada, expressed the hope that Mr. Cook would be able to bring the trade-relations of the home country with the colonies much closer. (Applause.)

Mr. DAVID HOWARD moved, and Mr. MUSPRATT seconded, a vote of thanks to the Carpenters' Company for their hospitality.

Mr. ALFRED PRESTON, as a warden of the Company, acknowledged the vote. He said that the Company had for many years taken a great deal of interest in technical education, and he had been the greater part of his life connected with the wholesale drug-trade, so that both on behalf of his Company and personally it gave him pleasure to welcome such an institution as this to the hall. While listening to the President's address he could not help feeling how much technical education was wanted in this country, and he hoped that the time was not far distant when Englishmen would equal Germans in facility in speaking other languages than their own. As a wholesale druggist he had been specially

interested in what the President had said about tinctures, and he was glad to say that the increase in the trade was not due to competition with Germans in price, for he was assured by colonial gentlemen that the high quality of the English preparations was what they preferred. (Hear, hear.) He hoped that English manufacturers would ever keep that factor in mind. (Applause.)

The members then adjourned to Cannon Street Hotel, where luncheon was served, about 350 sitting down. The afternoon was devoted to visits to the Tower Bridge, Cold Storage Works, and Breweries, and in the evening there was a

RECEPTION BY THE LORD MAYOR.

The reception, which was at the Mansion House, was a double-barrelled affair, two sets of invitations being issued, one to meet the President of the Royal Society (Sir Joseph Lister) and the members of the International Conference on the Classification of Scientific Literature; the other to meet the members of the Society of Chemical Industry. Over 800 guests crowded the Saloon, Egyptian Hall, and the adjacent apartments, admiring the display of civic plate, listening to the music of the band of the Royal Artillery, Woolwich, and the students of the Guildhall School of Music, and besieging the buffet. The Lord Mayor and the Lady Mayoress received their guests with the civic pomp and state usual on such occasions, among the more distinguished of the audience being the Italian Ambassador, the Swiss and Portuguese Ministers, Professor Michael Foster, Sir George Stokes, Sir Albert Rollit, M.P., and Miss Rollit, Professor Marshall Ward, Dr. Garnett, Mr. William Crookes, F.R.S., Professor and Mrs. Kennedy, Professor and Mrs. Jadd, Professor and Mrs. Roberts-Austen, Professor Jebb, Professor and Mrs. Rücker, Mr. Norman Lockyer and Miss Lockyer, Mr. and Mrs. A. Siemens, Sir David and Lady Teunant, Professor and Mrs. Raphael Meldola, Professor Armstrong, Professor Liversidge, of New South Wales, Professor Simon Newcomb, Mr. R. Trimar, of Cape Colony, Professors E. Mach and E. Weiss, of Vienna, Professor Christiansen (Copenhagen), Professors Gaston Darboux and Troost, of Paris, Dr. Daniker (Paris), Professor Dyck (Munich), Professor Działko (Göttingen), Professor Van't Hoff (Berlin), Professor Möbius (Berlin), Herr Director Schwalbe, M. Averoff (Greek Consul in Edinburgh), Professor Heller (Budapest), Professors Nagaoka and Osawa (Tokio), Don Francisco Ironcoso (Mexico), Professor Korteweg (Amsterdam), Dr. Brunchorst (Bergen), Dr. Dahlström (Stockholm), Professor Forel (Geneva), and a great many members of the Society of Chemical Industry with their ladies. The Chemical Industry Section congregated largely around their President, Mr. Thos. Tyrer, who was present with Mrs. Tyrer and Mr. and Mrs. Ludwig Mond. Our representative also saw before him a vision of a Bishop, who, from the prelate's proximity to the Alkali-King, he put down as his Grace of Sodor, but who appears to have been the Bishop of Stepney.

The rest of the week's programme is as follows:—

Thursday.—River Thames excursion, Caversham to Windsor. The route was by special train from Paddington to Reading. Then from Caversham Bridge, by launches, to the Abbey Hotel, Medmenham, where luncheon was served. Tea was served on the lawn at Sarley Hall, and the Society was welcomed by the Mayor of Windsor. Diving and after tea the gentlemen of the Eton College choir sang glees. The party then proceeded to Windsor by river, and returned by special train to Paddington. It rained all day.

Friday.—The Royal Arsenal, Woolwich, and Messrs. Siemens Brothers' electrical and telegraph cable works will be visited. Luncheon will be taken in the Masonic Temple, Mount Pleasant. In the evening, at the Hotel Cecil, the President will hold a reception at 7 P.M., and dinner will be served in the Princes' Room at 7.30 P.M. prompt. Smoking-concert at 8.30 P.M. prompt.

DENMARK has 81 "real" pharmacies, 81 "personal," 7 branch shops, 160 physicians who may sell medicines, 11 physicians who are permitted to dispense their own medicines but not keep open shop, and 10 general stores where medicines may be sold, except poisons and potent drugs and preparations.

Incorporated Society of Inspectors of Weights and Measures.

THE fourth annual general meeting of this Society was held at the County Hall, Spring Gardens, S.W., the offices of the London County Council, on July 9 and 10, and was attended by a large number of inspectors from all parts of England, Scotland, and Wales. The report of the Executive Council showed that the total membership of the Society was 267, and that during the year the list of Vice-Presidents had been strengthened by the addition of eight names, among them being that of Lord Kelvin. The Council referred to the conference of inspectors and scale-makers, which had been deliberating for the past twelve months with a view to obtaining certain drastic reforms of weights and measures law. A proposal came before the meeting that beer-barrels should be stamped. The Council reported that they had made the fullest inquiries into the matter, with the result that they found the arguments advanced by the members of the Society so well-balanced and opinions so evenly divided, that they did not feel justified in making a recommendation either for or against the proposal. They therefore recommended that the proposal should be dropped for the present. This was agreed to.

Sir Arthur Arnold, who occupied the chair at one of the sittings, advocated the adoption of the metric system as one means of securing that uniformity.

At another session Mr. E. J. Bevan, Public Analyst for Middlesex, read an exhaustive paper on "Suggested Amendments to the existing Laws affecting the Adulteration of Food." Mr. Bevan suggested that the Act should be amended to include within its scope all articles intended to enter into the preparation of human food, and all condiments and flavouring matters—such, for example, as baking-powder, which has been held not to be an article of food—and the use of preservatives, such as copper (in the famous case dealing with green peas), and boracic acid, which is largely used to preserve milk. Among other suggestions, Mr. Bevan recommended that the legal amount of ingredients which might be included as preservatives, colouring matter, in certain articles, might be left to the decision of a Board of Reference entrusted with full authority in such matters; that the British Pharmacopœia—reference to which was deliberately left out of the Act of 1875—should be regarded as the legalised standard to which all medicinal preparations should conform; that not only the deficiency of any constituent of a drug should constitute an offence, but also the presence of an excess of any substance should be placed on the same footing; that not only should the appointment of analysts under section 10 be made compulsory, but that the Local Government Board should be authorised to insist on the proper carrying out of the Food and Drugs Acts; that in view of the constant difference of opinion between public analysts and the Somerset House authorities, it is desirable that the analytic standards in the case of milk and various other articles should be incorporated in an Act of Parliament. Referring to the attitude adopted by the Somerset House authorities in opposition to the vast majority of public analysts, Mr. Bevan said he had no hesitation in saying that the chemical officers of Somerset House were responsible for much of the adulteration practised at the present day. He strongly urged the formation of a Board of Reference, and also suggested that increased penalties should be inflicted for breaches of the law. In 1894 the average penalty only amounted to *11. 15s. 7d.*

Trade Notes.

ALTHOUGH the Liquor Carnis Company were awarded by the Chicago Exhibition a diploma for Caffyn's liquor carnis "for excellence in usefulness and also for nutritive value," the company announce this week that they have made such an improvement on its flavour that they wish all retailers who hold stock of the liquor to return it to them, and they will send the new liquor for it. The exchange may be made either direct or through wholesale houses.

MESSRS. R. W. GREEFF & CO., 3 Eastcheap, E.C., have just published a useful pamphlet on "The Results and Successes of Serum Therapy," copies of which chemists can obtain on application. Messrs. Greeff, it will be remembered, are agents for the Société Chimique des Usines du Rhône (late Gilliard, P. Monnet & Cartier), 8 Quai de Retz, Lyons, and in the present pamphlet notes are given of the uses of anti-diphtheritic serum, anti-streptococcic serum, anti-venomous serum, anti-tuberculous serum, and vaccine-lymph made by the société.

Personalities.

MR. A. J. FREELAND, chemist, of Kibworth, has passed with honours an examination at Leicester entitling him to be a licentiate of the College of Violinists.

PROFESSOR H. H. RUSBY, of New York, has returned from his botanical trip on the Orinoco. He got splendid specimens, and he should be a good correspondent for botanists during the rest of this year.

THE Governors of the Bradford Deaf and Dumb Institution have elected Dr. Chas. Forshaw Honorary Dental Surgeon to the Institute. Dr. Forshaw is the eldest son of Mr. T. G. Forshaw, M.P.S., The Infirmary Pharmacy, Bradford.

MR. H. A. D. JOWETT, of the Pharmaceutical Society's Research Laboratory, has just been successful with his thesis for D.Sc. London, and will be capped at the approaching ceremonial. Mr. Jowett is leaving the Square to take up work with a leading City firm. Mr. Jowett is an ex-Bell Scholar, and has also held the Redwood and Manchester Association Scholarships since he passed the Major examination.

DR. GORDON SHARP, who has promised the Pharmaceutical Conference a paper for the Liverpool meeting (it is to be on the active principles of diphtheria antitoxin), is to be capped M.D. at Edinburgh next month, his thesis being on diphtheria antitoxin. Dr. Sharp is a native of Boat of Garten, and after serving his apprenticeship to the drug-trade there, became an assistant to Mr. Peter Boa, Edinburgh, and passed the Minor in due course. He then studied medicine at the Edinburgh University, and took the M.B., C.M. degree in 1891. He is a good therapist, and had a large share in the editing of the last edition of Scoresby-Jackson's "Materia Medica."

MR. G. J. KNIGHT, of Windle & Co., Edgware Road, is the "Marylebone Celebrity" in the local *Mercury* of last week, and a fairly good portrait accompanies the two-column biographical sketch. It is because Mr. Knight is "a leading Conservative politician, a prominent local administrator, and a churchwarden of one of the large district churches of the parish," that the *Mercury* writes of him, and we learn from the sketch that he was born forty-five years ago at Norwell, Nottinghamshire. He was educated at the Collegiate School, Southwell, and at the Milk Street School, Sheffield. Mr. Knight came to London at the age of 19, and in 1878 became the proprietor of Windle & Co.'s pharmacy. The *Mercury* says many good things about Mr. Knight.

WE had the pleasure of a call from Mr. W. H. Dyas, of Toronto, proprietor of the *Canadian Druggist* of that city. We took the opportunity of Mr. Dyas's call to have a chat with him in respect to the contemplated reform in the Canadian tariff. Mr. Dyas does not think that the recent reverse to the Conservative party in Canada will have great influence in promoting free-trade in that country. All that can be looked for in the meantime is some slight modification of the tariff; but Mr. Dyas believes that the feeling in Canada favourable to Imperial reciprocity is becoming much stronger, and that it may ultimately lead to some practical scheme for favouring natural produce of the respective colonies in preference to similar produce exported by foreign countries. This is as far as sober politicians will go in the meantime, for the feeling in favour of protecting home industries is much stronger than we free-traders at home can appreciate.

Bankruptcies and Failures.

Re FREDERICK JAMES LEA, 43 Tontine Street, Folkestone, Chemist and Druggist.

THE statement of affairs herein has just been issued by Mr. Worsfold Mowel, the Official Receiver of the East Kent (Canterbury) Bankruptcy Court. The gross liabilities amount to 1,148*l.* 16*s.* 10*d.*, of which 245*l.* 1*s.* 10*d.* is due to unsecured creditors, 872*l.* 15*s.* to fully-secured creditors, and 21*l.* to preferential creditors. The assets are estimated to realise 930*l.* 4*s.*, as follows:—Cash in hand, 4*s.*; stock-in-trade (cost 400*l.*), 300*l.*; trade fixtures, fittings, utensils, &c., 200*l.*; furniture, 200*l.*; goodwill of business, 200*l.*; book debts, estimated to produce 30*l.*. The surplus is returned at 664*l.* 2*s.* 2*d.* The bankrupt commenced business as a chemist about 1882 at his present address, where his father had previously carried on business. He purchased the stock, fixtures, goodwill, &c., for 400*l.*, which he has repaid by instalments of 5*l.* a month. For some time the business appears to have been successfully carried on, but the bankrupt states that owing to competition the trade has fallen off. The value of the assets as set out above is (in the Official Receiver's opinion) largely over-estimated. There may, however, be some value in the goodwill, the bankrupt being the proprietor of four chemical specifics which are stated to be profitable. The bankrupt is the owner of the premises No. 43 Tontine Street, Folkestone, where the business is carried on. The value is estimated at 800*l.*, for which sum it is mortgaged. He is also entitled to a reversionary interest under the will of his grandfather in one-seventh of a sum of 700*l.*, subject to the life of a lady now aged 76.

Debtor appeared for his adjourned public examination at the sitting of the East Kent (Canterbury) Bankruptcy Court on Friday before Mr. Registrar Farley, and was allowed to pass.

Re THOS. FLETCHER, deceased, 131 Leek Road, Smallthorpe Staffs, late Chemist, &c.

IN this case the gross liabilities amount to 1,657*l.* 9*s.* 3*d.* (unsecured 769*l.* 3*s.* 6*d.*), and assets 758*l.* 4*s.* 3*d.*, or a deficiency of 10*l.* 19*s.* 3*d.*. The following are creditors:—

	£	s.	d.
Berrisford & Co., Macclesfield	160	7	1
Coleman & Co., Liverpool	12	7	6
Evans, Sons & Co., Liverpool	155	0	0
Gilbey & Co., London	13	16	5
Jewsbury & Brown, Manchester	10	11	0
Malkin Brothers, Burslem	40	10	7
Morris & Jones, Liverpool	54	9	10
Oldfield, Pattinson & Co., Manchester	39	5	0
Pepper, Mrs. M., Stoke	30	0	0
Rigby & Co., Frodsham Bridge	22	10	0
Sissons Brothers & Co., Hull	72	0	0
Smith & Keen, Hanley	12	13	10
Scragg, St. Stoke	13	18	11
Walley's Exors., Hanley	25	17	0
Wood & Parkes, Hanley	13	15	10
Yates, S., Manchester	14	18	10

Fully secured Creditors.

Cole, Jno., Biddulph	400	0	0
Fletcher, Jas. F., Chester	100	0	0
"Bankers," Burslem	115	8	0
Slater, Thos., Stone	200	0	0

Preferential Creditor.

Sheriff's charges	46	14	5
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Re JOSEPH WILLIAM SENIOR, Cope Street, Barnsley, Unregistered Druggist.

THE creditors of this bankrupt, who is now out of business, held a meeting on July 8 at the offices of the Official Receiver, Barnsley. The liabilities were returned at 98*l.* 5*s.* 0*d.*. There are no assets, the fees for filing the petition having been found by a friend of the bankrupt. The bankrupt previously failed in 1891, and had not been discharged from that bankruptcy. He had since managed a shop for his father at Sheffield Road, but his father gave

up the business in June, 1895, and the debtor, who was not a licensed chemist, had since carried on the business himself. His furniture belongs to his wife. He had kept no books, and estimated his income at 20*s.* a week for the past year, during the whole of which time he had been hopelessly insolvent. The matter was left in the hands of the Official Receiver.

Gazette.

PARTNERSHIPS DISSOLVED.

Elliot, E. A. S., and Bashall, C. E., surgeons, Kingsbridge, Devon, under the style of Elliot & Bashall.

Jones, T., and Tate, G. T., surgeons, Mansfield.

Tapson, A. J., and Lake, G. R., surgeons and general practitioners, Gloucester Gardens and Gloucester Terrace, Hyde Park, W., under the style of Tapson & Lake.

THE BANKRUPTCY ACTS, 1833 AND 1890

RECEIVING ORDERS.

Aikman, Alfred, Kingston-upon-Hull, surgeon.

Coffin, Thomas Walker, Upper Park Road, Haverstock Hill, N., surgeon.

Deeds of Arrangement.

Laing, John William Anderson, 47 Lord Street and 13 Belmont Street, Southport, chemist and druggist. Trustee, George W. Healy, Wigan, chartered accountant. Dated, July 3; filed, July 8. Liabilities unsecured, 354*l.* 14*s.* 11*d.*; estimated net assets, 453*l.*. The following are scheduled as creditors:—

	£	s.	d.
Ayrton & Saunders, Liverpool	21	0	0
Lawton, W., Southport	30	0	0
Thompson, J. (Limited), Liverpool	65	0	0

Shawcross, Aaron, 121 Toll Bar, Haydock, and 141 Chaucery Lane, St. Helens, drug and patent-medicine dealer. Trustee, John Hammill, Bank Chambers, St. Helens, chartered accountant. Dated, July 2; filed, July 8. Liabilities unsecured, 135*l.* 16*s.*; estimated net assets, 142*l.*. The following are scheduled as creditors:—

	£	s.	d.
Atherton, J., St. Helens	24	0	0
Clay, Dodd & Co., Liverpool	20	0	0
Dewar, P. (executors of), St. Helens	22	0	0
Gordon, J., Birmingham	24	0	0

Business Changes.

MR. JOHN BLAMEY, formerly with Messrs. Pope, Roach & Son, chemists to the Prince of Wales, has purchased the old-established business of Mr. W. F. Newman of 8 Market Street, Falmouth.

MR. THOMAS BLOODWORTH, lately with Messrs. Shadford & Co., Spalding, has acquired the business of Messrs. Penrose & Co., Amwell Street, Pentonville, and also that of Messrs. Laurens & Son, Blackheath.

MR. A. J. SARSON (from Messrs. Keene & Ashwell, New Bond Street, W.) has taken over the business formerly carried on by Mr. Biddiscombe at Willesden Green. The pharmacy has been altered to the most modern style.

MR. WM. DAVIES, who has been for twenty years one of the representatives of Messrs. Richardson & Co. Leicester (Limited), has joined Mr. Richard Gibbins, wholesale druggist, of Derby, in partnership, and the firm will trade under the style of Davies, Gibbins & Co.

MESSRS. POTTER & CLARKE, wholesale botanic druggists, of Artillery Lane, Bishopsgate, announce that they have admitted into partnership Mr. Henry A. Potter, M.P.S., the son of their Mr. H. Potter, and Mr. Richd. C. Wren, who has for many years been their general manager. The style of the firm will continue as before.

MR. JOHN SIMON, who was five years principal assistant with the late Mr. John Mills, pharmaceutical chemist, Chester, has taken over the business from the widow. Mr. Simon has also been appointed honorary treasurer of the Chester Society of Natural Science and Literature, a position which was held by Mr. Mills. The Society was founded in 1871 by Charles Kingsley.

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Editorial Comments.

A CHEMICAL CONTRAST.

IN his address as President of the Society of Chemical
Industry Mr. Thomas Tyre has succeeded in throwing a
new interest into that threadbare subject, England *versus*
Germany, and that in a very simple manner—viz, by pre-
senting more clearly than has been done before the German
view of the matter. It is a common enough notion that
German chemical manufacturers succeed because they are

better educated than all others, are freer from legislative restrictions than our own manufacturers are, and get labour and materials cheaper than we do. We gather from what Mr. Tyrer says that none of these things, separately or together, wholly explains Germany's steady progress in chemical industry during the past twenty years, but he certainly has not divorced himself from the opinion that German education is the chief factor in determining the quality and cheapness of output. We would go further than Mr. Tyrer has done by noting one of the chief drawbacks to Britain in the competition with Germany—viz., the comparatively greater age of our industries. Too little consideration is given to this fact by students of international commerce. Here in England we have industries which have been built up on the old method—viz., the qualification of the principals, men who worked before technical education was even heard of, and who taught those under them that the only school in which technique could be learnt was the school of experience. Under that system we have slowly and surely built up industries which are the envy of the world, and an immense amount of money has been sunk in them. At this stage, about twenty years ago, United Germany began to feel her power in Europe, and suddenly stepped into the broad daylight of modern methods. She saw how she could, by the quick method of teaching, bring her workers into line with those of other nations. Her burden of old plant was a light one; she had the accumulation of our experience to gather from; we sold her machinery and gave her overseers to work it, and it is a fitting consummation that in less than a generation we should find ourselves with a formidable competitor. The broad results of the evolution are that we have been driven out of a few markets by cheaper German products, and we have begun to appreciate the value of technical schools. Of the first of these results little need be said. We know that we get some very good articles—chemicals particularly—from Germany, but "Made in Germany" is too often typical of all that is cheap and nasty, and German Consuls are as free as others in telling their home manufacturers that they must compete in quality as well as in price if they are to retain export trade. Mr. Alfred Preston spoke admirably, though briefly, on this point at the meeting. Mr. Tyrer appears to be somewhat half-hearted in regard to English schemes of technical education. Every one recognises that our whole system of education, from the dame's school to the university, lacks that machine-like precision of graduation which is characteristic of German education; and we may deplore this to our heart's content without pushing on reform much faster than it is going now. Our English peculiarities respecting education are the growth of centuries of practice, and there is so much good in the system that we remove the bad slowly for fear we should take good with it were the process a quick one. We should have preferred if Mr. Tyrer had been a little more precise on this point, particularly as his wide experience in the management of secondary schools should have given him material for showing how adequate elementary and technical education can be made an organic whole, and be obtainable at such a price that we can hope for that ideal class of intelligent workmen which he dreams of. Ireland and Scotland have, in a measure, mastered the problem of secondary education, with the result that their scholars take a proportionately larger share of official appointments than their populations warrant. In the meantime England continues on the old-fashioned idea that the chief object of education is to make "gentlemen," and until we get schoolmasters to understand that we also need chemists, engineers, and the like, our pro-

gress will be relatively slow. Happily, we have university colleges and technical schools springing up all over the country, and they give great hopes for the future; but it must be in the future that these institutions will have a direct influence upon British commerce. Mr. Tyrer points out how the teachers in similar German schools are in direct touch with local manufacturers. We wish he had gone a little further, with examples of the association, and endeavoured to show what would be the immediate result of it in this country. We seem to have an ingrained prejudice against such association, and it is especially shown in pure science circles, from the inner courts of which men are practically ostracised if they happen to turn their research into a practical or commercial undertaking. It is only such geniuses as Lord Kelvin who do not get the cold shoulders of their *confrères*. They seem to manage the thing better in Germany; probably patriotism is responsible for it; but if Mr. Tyrer and those who think with him wish it brought about in this country they must start the crusade in the learned societies. Mr. Tyrer had no moral to his address, and we are glad of that, because Mr. John Glover, to whom he awarded the Society's gold medal, supplied a living one. Here was a man of 80, one of the old school of chemists now passing away, whose brain has given the world an invention which has saved this country alone 300,000% a year. John Glover is rich in the consciousness that he has served his country well; very little of the wealth he has created has, we fear, gone into his pocket, but the Society of Chemical Industry has done its share of duty towards discharging the national debt of gratitude.

THE BUSINESS OF THE FUTURE.

LAST Friday Mr. J. S. Parcell, the Registrar of Joint-stock Companies, gave evidence before the Select Committee of the House of Lords on the Companies Bill, in the course of which he stated that the number of companies registered under the Companies Acts was greater now than at any previous period. Taking England alone, the number registered during the first ten years after the passing of the Act of 1862 averaged 670 annually; during the next ten years, 1,085; during the ten years ending 1892, 2,016; whilst the average of the last three years had been 2,845; and in the six months of the present year 2,149, being at the rate of 4,298 per annum. At the present moment there are upwards of 20,000 companies in the United Kingdom making annual returns, and their capital, paid up, or treated as paid up, was returned at upwards of 1,000 millions sterling. Altogether, some 51,000 companies had been registered under the Companies Acts up to the end of 1895. Mr. Parcell estimates that 50 per cent. of the companies registered prove to be abortive or have an ephemeral existence.

The capital invested in joint-stock enterprise will be generally supposed to be much the smaller proportion of the business capital of the country, though, as it includes most of the great enterprises of the nation, such as railways, banks, shipping, &c., and most of the largest manufacturing businesses, this should not be too readily assumed. To roughly estimate the total of the capital invested in business in England and Wales only, let us assume that the thousand millions yields an average profit of 5 per cent.—that is, an aggregate of 50,000,000% a year. The total of the incomes charged with income-tax in England and Wales under Schedule D is 134,000,000%. This covers all business incomes except those derived from agriculture, and those (a very large bulk) which are exempt from tax. But 5 per cent. would not be a profitable income on private business capital, so that we must allow a much smaller capital to bring in

the 84,000,000*l.* capital. From this it would seem probable that nearly, if not quite, one-half of the capital invested in this country in business is employed in joint-stock enterprise.

We do not by any means guarantee the soundness of this inference; but we give it for what it may be worth. What is beyond dispute is the growing rapidity with which joint-stock and limited-liability companies are superseding private traders. If the rate of progression which has characterised the first half of this year should continue throughout the twelvemonths, the number of new companies registered in 1896 will be nearly double that of any preceding year. The increase is very largely due to the improvement in trade and the gradual unlocking of capital. The long-continued complaints of the prevailing low rate of interest were certain to stimulate the philanthropy of the men willing to give 5, 10, or 15 per cent. for the use of our money. But apart from these spurts, it is clear that the system of joint-stock trading is acquiring a strong hold here, not only in regard to enterprises of national importance, but also in businesses which were looked upon not long ago as only suited for individual conduct.

Setting aside for the moment the special grievance which pharmacists have against joint-stock trading, it is a fair topic for consideration whether the extension of the system is likely to be a benefit to the community or otherwise. It is by no means improbable that, before the next century is very old, a good portion of the retail trade and the greater part of the wholesale and manufacturing industry of this country will be in the hands of companies. It is extremely likely that the so-called "private" companies—that is, companies whose shares are not offered promiscuously to the public—will become much more numerous. If the law can efficiently prevent the abuse of the system this will not be an unsatisfactory development. It will retain the advantage of a personally interested management, and will give the opportunity for distributing co-operative interests among the workers in a business. This benefit is an obvious possibility of all joint-stock companies, and if wisely directed it may be the way in which disputes between capital and labour will find their settlement. By joint-stock enterprise great works are undertaken which individuals might fight shy of for generations; and, on the other hand, opportunities are given for the profitable employment of capital which would otherwise be hoarded. But the opportunities for abuse of the system must always be numerous, and can only be checked at the risk of unreasonably hampering legitimate business. How far the law can go in this direction is the problem now being considered by the House of Lords Committee.

However adaptable the joint-stock system may be to trade in all its branches, the Committee will, we hope, recognise before it has finished its sittings that it is simply incompatible with professionalism. A company, as a company, cannot practise as a physician, a surgeon, a barrister, a clergyman, a dentist, or a pharmacist. These occupations, so far as they are professional, must always be left to individuals, and the law which provides a means of distinguishing individuals skilled in the arts which those titles represent only stultifies itself when it says that companies may use those titles without the possibility of the possession of the skill.

GERMAN COMPETITION.

MR. STEAD's fever fits have become so familiar to the readers of the newspaper or magazine which he makes his platform that his subscribers have come to regard them as an almost essential part of the entertainment which he undertakes to

provide in return for the monthly sixpences which keep his lively journalistic pot on the boil. Not that Mr. Stead is ever anything short of deadly earnest. He is always that, whether his missionary zeal is excited on a social, naval, religious, or commercial topic. In this month's *Review of Reviews* he publishes a stirring appeal to the nation to save itself from the inevitable and apparently imminent ruin of its industrial existence, not to say supremacy, which is threatened by German competition. Mr. Stead has been reading the volume of essays entitled "Made in Germany," on which we commented while they were being published in serial form (*C. & D.*, May 16, 1896, page 697), and we cannot but be glad to see the Anglo-Saxon vigour with which he seconds the author of that work in his efforts to alarm the British manufacturer. In our review of Mr. Williams's statements concerning the chemical-trade we pointed out some inaccuracies and a good many exaggerations, but it would be ridiculous to question the solid foundation for his and for Mr. Stead's alarm. German manufacturing industry has progressed at a marvellous rate during the past quarter of a century. It has had the benefit of the fostering care of the State, and of lower rates of wages for labour than are prevalent in this country. But these factors are by no means sufficient to account for the expansion of German commerce and the large degree of success which has attended German competition. Mr. Stead picturesquely points out that the Germans beat us by more science and less rule of thumb. "Our practical men," he says, "sneer at the professors who are so abundantly employed by their German rivals. So it was the custom in the French barracks to sneer at the spectacled professors of the German army, until more than a score of victories attested the fact that the spectacled ones knew their business better than those who sneered at them. In time, no doubt, the English manufacturer will be taught the same bitter lesson in his own field." Mr. Stead calls upon us, and we suppose on all newspapers, to assist him in an agitation for getting an Education Bill passed even this session, so that our technical education may be made to match that of Germany. We do not doubt he is right in insisting that Britain must do much more in this direction than it has yet done. But the more important point to urge is the necessity of more painstaking efforts to meet the requirements of customers, and of a much more lavish expenditure on the part of our manufacturers. At present, as Mr. Williams truly says, the rule in the English factory is to keep a morbidly jealous eye on the expenses. The manufacturer wants all the cash that can be spared for personal expenditure. The German factories are built, equipped, and manned regardless of expense. We shall have to emulate them in this direction. The subject is evidently new to Mr. Stead, and he strikes out a little wildly. There are more educational facilities in this country now than are taken advantage of. What is wanted is that there shall be a better field for the employment of technical education when it is acquired, and this our captains of industry can make by showing a more intelligent and substantial appreciation of it.

HOW TO GET TO THE CONFERENCE.

It is fully expected that a large contingent of London pharmacists will attend the meeting of the British Pharmaceutical Conference at Liverpool, and with a little preconcerted action a pleasant travelling party may be made up. There is no hope of any concession in regard to fares being made, but we may call attention to the fact that both the London and North-Western and the Midland Railways run Saturday excursions to Liverpool for three, eight, ten, fifteen,

or seventeen days at an 18s. return fare (third class), leaving Euston at 12.1 A.M., and St. Pancras at 10.5 A.M. on Saturday mornings; but neither of them quite fits in with the Conference requirements, and the journeys do not appear to be inviting. We gather that most London pharmacists who are to go north will travel on Monday morning. They have the choice of the rapid journey of a little over four hours from Euston, one train leaving at 10.10 A.M., arriving in Lime Street at 2.35, and another leaving at 12.10, arriving at 5 o'clock. The Midland route is much more picturesque, though not so speedy. The 10.5 A.M. from St. Pancras arrives at Liverpool Central at 3.35, while the 12.10 arrives at 5.20. Opinions are in favour of the last-mentioned train, and the manager of the Midland Railway has offered to put on a luncheon-car if a party of twenty can be made up, and an ordinary saloon car for twelve (third class). Single tickets should be taken, as there is no advantage in the return fare. We strongly commend intending visitors to send in their names at once to the Assistant-Secretary of the Conference, 17 Bloomsbury Square, W.C., for the 12.10 Midland; and those who prefer the Western route should notify him for the 12.10 from Euston. The manager of the London and North-Western informs us that he will reserve a saloon for a party of twelve or more passengers (third class) travelling together. Any pharmacists in towns on the routes who are going to Liverpool should also endeavour to take either of these trains, and if they notify the Assistant-Secretary seats will be reserved for them, and they will join the train at the respective stations. Generally at Conference times travelling parties are made up privately, and it often happens that a few others arrive at the station to find that they are "not in it," and imagine that the select circle do not wish more to join them. This notion is entirely erroneous, and it is to obviate a continuance of that spirit that we now suggest that all who are to travel to Liverpool from London and other stations between should send in their names to the Assistant-Secretary. Pharmacists in other districts should take similar action amongst themselves, and get the best accommodation they can from the railway companies, who are usually willing to make a concession in that respect if they are politely asked for it.

FEWER FAILURES.

The last annual report on the working of the Bankruptcy Act, just issued by the Board of Trade, contains a new feature in the form of a classified table showing the failures under the Bankruptcy and the Deeds of Arrangements Acts for the last five years. Unofficial statisticians have been giving us this classification for a good many years past, but the Board of Trade have improved upon their tables by showing the amount of the liabilities involved in these failures. The Board of Trade divides its subjects into sixty-six classes, and the following results are gathered from this table. The total number and value of failures in the years specified were:—

	No.	Liabilities.
1891	7,224	£13,655,389
1892	7,968	£14,720,053
1893	8,812	£15,066,233
1894	8,656	£13,382,905
1895	7,838	£11,397,212

The improvement shown during the last two years seems almost too good to be true. It appears from other tables that in 1895 the percentage of estimated assets to estimated liabilities was lower than in any year since 1889, being only 31.4 per cent.; in deeds of arrangement, however, the proportion (52 per cent.) was higher in 1895 than it was in either

of the three previous years. The failures and liabilities of chemists and druggists are thus given in the table:—

1891	50	£80,230
1892	42	£59,922
1893	60	£51,719
1894	47	£57,552
1895	61	£62,832

To show what a feeble folk we are, we quote the figures referring to grocers in contrast. The failures in this trade in the years named respectively were 832, 1,044, 1,053, 893, and 854; and the liabilities were 767,457l., 964,590l., 968,931l., 765,112l., and 710,841l. respectively. Only from 21 to 36 "doctors, surgeons, &c." fail per year, and their liabilities vary from 19,000l. to 39,000l.

M. PRESS-IVE ADVICE.

An Oxford Street draper starts a drug-department, and an Irish Board of Guardians give a medicine-contract to a whisky dealer, therefore the *Medical Press* calls "the attention of the Pharmaceutical Societies of England and Ireland to these facts, in order that they may defend their privileges if they find it necessary, and we venture to suggest (continues the *M. P.*) that chemists will do better if they expend their energies upon protecting their legitimate function from the inroads of quacks than in striving, to compensate themselves by counter-prescribing profits. For the medical profession, we may say that it is distinctly to our advantage that the compounding of prescriptions and the supply of drugs should be open to all comers, and it is not, therefore, any business of ours to vindicate the authority of the pharmaceutical trade." Our hearty thanks, dear *M. P.*, for your unsolicited interest in these amateur pharmacists, but it is a little too late in the day for medical representatives to pnt on such superior airs regarding true pharmacy. Better pull an oar with us while there is the chance.

BEEF-AND-MALT WINE.

This is a therapeutical blunder, according to Dr. F. C. Coley, of Newcastle-on-Tyne, who writes a rather ill-tempered paper about it in the *Lancet*, mentioning, but not naming, a particular wine, and sneering at the offer of debentures in the company which owns it. His real criticisms is to the following effect:—

Extract of beef is not food. It has its use, however. First and foremost, it is valuable because of its meaty flavour, on account of which many patients can take with it bread or lentil-flour, &c., which would otherwise be unacceptable. It is also a harmless stimulant. Lastly, it decidedly favours sleep. To combine such a preparation with port wine shows a complete ignorance of its real uses. The slight stimulating effect of the very small quantity of the extract contained in an ordinary dose of the wine would be wholly inappreciable in the presence of the alcohol. It is plain that the only conceivable motive for such a combination must be the erroneous notion that extract of beef is capable of doing duty as a food. Extract of malt is a valuable preparation, but Dr. Coley doubts whether an adequate dose of it can be contained in a wineglassful of the very mobile fluid which is sold as beef-and-malt wine. Nor has he any reason to suppose that its powers for good are likely to be improved by mixing it with an unknown proportion of an alcoholic liquid.

X RAYS IN DENTISTRY.—Dr. W. J. Morton, a New York dentist, believes that the x rays will greatly aid the art of dental surgery. By means of the skiagraphs each errant fang is distinctly placed, however deeply imbedded within its alveolar socket; teeth before their eruption stand forth in plain view; an unsuspected exostosis is revealed; a pocket of necrosis, of suppuration, or of tuberculosis is revealed in its exact outlines; the extent and area and location of metallic fillings are sharply delineated, whether above or below the alveolar line. The pulp-chamber is beautifully outlined, and erosions and enlargements may be readily detected.

Pharmaceutical Society of Great Britain.

JULY EXAMINATIONS.

WE have received from the Registrar of the Pharmaceutical Society of Great Britain the following lists of candidates who were granted certificates at the July meeting of the London Board of Examiners:—

MINOR EXAMINATION—PASS LIST.

Candidates examined	208
" failed	72
" passed	136

Blakeley, William
Brown, Charles
Chambers, Frank Dawson
Clarke, William John
Cleave, Thomas William
Collin, John Francis
Courtenay, Edward
Critchley, Charles Albert
Daniels, Herbert Joseph
Desmond, Dennis Wm. Andrew
Dewhurst, John Arthur
Dickenson, Joseph Fredk.
Edwards, Lewis
Evans, Octavius William
Evans, Ralph James
Falkner, Sandbrook
Firth, Fred.
Fisher, George Howard
Frith, John Benjamin
Fulleylove, George Ernest
Gedge, Horatio Wm. Turner
Greaves, Alfred Ellis
Green, Hugh
Greenville, Ernest Gould
Griffiths, Alfred
Hadley, Mary Winifred
Harrison, Thomas Arthur
Hooper, Francis William
Hooper, Richard John
Hornby, Frederick William
Hughes, Robert Vaughan
Hunt, Harold Edward
Hutchings, Thomas
Ireson, Ernest Edward
Johnson, Walter Thomas
Kelf, Henry David

Knight, Richard
de Lisle, Francis Rouget
Long, Herbert Samuel Amis
Long, James Christmas
Mason, William Edward
Newton, Thomas Frederick
Ordish, Francis Prior
Packer, Frederick Ernest
Peck, Harold Robinson
Picken, Charles Reynolds
Pitcher, James Frederick
Plumstead, Frederic Geo. Edward
Raine, Robert Martin
Raybould, George
Roberts, John Theodore
Robinson, Richard Charles
Rosser, William Marmaduke
Ruff, William
Salthouse, Edward
Sargeant, Fredk. Pilkington
Seaton, Richard
Shaw, Henry Woolhouse
Silver, Sydney Ward
Smith, John
Sparrow, Tom Rosson
Stamp, George Harry
Temple, Frederick William
Thomas, James Douglas
Turner, Alfred William
Underwood, Albert Henry
Walters, John
Wardale, Francis Charles
Webb, Ernest George
White, Frederick Ernest
Wickens, Thomas Isaac James
Willmott, Frank

MAJOR.

In London forty-two candidates were examined, eighteen failed, and the following twenty-four passed:—

Bowen, Edgar Cecil
Brice, Henry Doyle
Davis, Sidney
De Morgan, Fredk. Filmer
Hill, Charles Alexr.
James, Henry Palmer
Lean, Wilfred
Nicholson, John Gordon
Payne, Roger
Rymer, Frank Victor
Senter, George
Smith, Albert George

Smith, Maurice
Spurge, Edward Charles
Stamp, Francis Underwood
Stones, Arthur John
Sturch, Harry Howes
Taylor, Archibald Leonard
Tunbridge, Francis Fredk. Arnall
Veitch, Wm. Cuthbert
Wild, George Herbert
Williams, George
Williams, John (Corwen)
Wilson, Harold

In Edinburgh seven candidates were examined, four failed, and the following three passed:—

Bateson, Alfred Campbell
Currie, Archibald

Latham, Hugh

"FIRST" EXAMINATION.

THE following are the questions given on Tuesday, July 14:—

LATIN.

(Time allowed—from 11 A.M. to 12.30 P.M.)

I. For all candidates. Translate into Latin:—

1. I love his brother more than him.
2. He will do it if he is able.

3. The gifts of the enemy will not be preserved.

4. I asked him to come to Athens.

5. A council having been held, they resolved to send ambassadors to the enemy.

II. Translate into English either A (Caesar) or B (Virgil).

(Candidates must not attempt both authors.)

A. CAESAR.

1. Ad hanc Ariovistus respondit: Jus esse belli, ut, qui vicissent, his, quos vicissent, quemadmodum vellent, imperarent: item Populum Romanum victis non ad alterius praescriptum, sed ad suum arbitrium, imperare consuesse. Si ipse Populo Romano non praescriberet, quemadmodum suo jure uteretur; non oportere sese a Populo Romano in suo jure impediri. Aedus sibi, quoniam belli fortunam tentasset et armis congressi ac superati essent, stipendiarios esse facias.

2. Hi neque vultum fingere, neque interdum lacrimas tenere poterant: additi in tabernaculis, aut suum fatum querebantur, aut cum familiaribus suis commune periculum miserabantur. Vulgo totis castris testamenta obsignabantur. Horum vocibus ac timore paulatim etiam ii, qui magnum in castris usum habebant, milites centurionesque, quique equitatu praeerant, perturbabantur.

Grammatical Questions.

(For those only who take Caesar.)

1. Decline in the singular *suis familiaribus*; and in the plural *commune, periculum*. (Passage 2)
2. Give the principal parts of all the verbs in Passage 1.
3. Parse fully the following words:—*interdum, additi, querebantur, fatum castris, equitatu*. (Passage 2.)
4. Write in Latin 17, 23, 1896, 13th, 76th, 102nd, fourteen times, one thousand cavalry, ten thousand infantry.

B. VIRGIL.

1. "His ego nec metas rerum nec tempora pono;
Imperium sine fine dedi. Quia, aspera Juno,
Quas mare nunc terrasque metu celumque fatigat,
Consilia in melius referet, necumque fovebit
Romanos rerum dominos gentemque togatam.
Sic placitum. Veniet lustris labentibus aetas,
Quum domus Assaraci Phthiam clarasque Mycenae
Servitio premet, ac victis dominabitur Argis."
2. "Jupiter,—hospitibus nam te dare jura loquuntur—
Hunc laetum Tyrisque diem Trojaque profectis
Esse velis, nostrosque hujus meminisse minores.
Adsit laetitia Bacchus dator, et bona Juno!
Et vos, o coetum, Tyrii, celebrate faventes!"
Dixit, et in mensam laticum libavit honorem;
Primaque libato summo tenuis attigit ore.

Grammatical Questions.

(For those only who take Virgil.)

1. Decline in the singular *gentem togatam*; and in the plural *lustris labentibus*. (Passage 1.)
2. Give the principal parts of all the verbs in Passage 1.
3. Parse fully the following words:—*Jupiter, profectis, hujus, celebrate, faventes, tenuis*. (Passage 2.)
4. Write in Latin 17, 23, 1896, 13th, 76th, 102nd, fourteen times, one thousand cavalry, ten thousand infantry.

ARITHMETIC.

(Time allowed—from 12.30 P.M. to 2 P.M.)

(The working of these questions, as well as the answers, must be written out in full.)

1. Find the least number which, added to One hundred and fifty-two million one hundred and eighty-one thousand two hundred and fifty-five, will make it exactly divisible by 3854.
2. Find the value of $(\frac{1}{4} + \frac{5}{8})$ of $(\frac{3}{4} - \frac{7}{8})$ of 3 tons 15 cwt. 3 qr.
3. Multiply 21825 by .0046, and divide the result by .002425.
4. If $4\frac{3}{4}$ fields of $18\frac{1}{2}$ acres each can be mowed by 7 machines in 2 days, how many fields of $28\frac{1}{2}$ acres each can be mowed by 6 such machines in 3 days?
5. In what time will 1,158l. 17s. 6d. amount to 1,196l. 19s. 6d. at $2\frac{1}{2}$ per cent. per annum?
6. A landlord has an estate that brings him in 4,000l. a year, but this is liable to deductions for rates and repairs to the extent of 15 per cent. He sells the estate at 24 years' purchase on the gross income, and invests this money in a 3 per cent. stock at 97½. What is the difference in his income? (Answer to nearest shilling.)
7. If a cubic metre contains 1,000 litres, find (approximately) the number of cubic inches in 3 litres.

ENGLISH.

(Time allowed—from 3 P.M. to 4.30 P.M.)

1. Analyse :—

"There at the foot of yonder nodding beech,
That wreaths its old fantastic roots so high,
His listless length at noontide would he stretch,
And pore upon the brook that babbles by."

2. Parse fully :—"Don Roderick turned him as the shout grew loud."

3. Correct the following sentences, giving your reasons :—

(i.) Me and my friend went for a walk together.

(ii.) He entered into the room to quickly.

(iii.) You can only have this when I am done with it.

4. In the following passage supply the necessary capital letters, and put in the stops and inverted commas where necessary :—I have come from my lakes he said as a stream descends from the hills not to turn again but to accomplish my course my voice shall be for that general who will possess qualities which are necessary to command men like us are you prepared thence of menteith to say where such a general is to be found there is but one said allan and here he said laying his hand upon the shoulder of anderson who stood behind lord menteith here he stands.

The following question must be attempted by every candidate :—

5. Write a short composition on one of the following subjects :—

(i.) The Navy of Great Britain.

(ii.) Technical Education.

(iii.) Common Sense.

(iv.) Vivisection.

JACOB BELL SCHOLARSHIPS' EXAMINATION.

The papers given to candidates on Tuesday were as subjoined :—

Time allowed—three hours (11 to 2).

(In awarding marks the neatness and legibility of the writing will be taken into account.)

NOTICE.—In framing answers, candidates should not enlarge upon the questions, but should confine themselves to giving, as briefly and clearly as they can, the information required.

LATIN.

1. Translate into English :—

Tum litore curvo
Exstruimusque toros dapibusque epulamur opimis.
At subitae borifico lapsu de montibus adsunt
Harpyiae et magnis quatitunc clangoribus alas,
Diripiuntque dapes contactuque omnia foedant
Immundo; tum vox tætrum dira inter odorem.
Rursum in secessu longo sub rape cavata
Arboribus clausi circum atque horrentibus umbris
Instruimus mensas arisque reponimus ignem:
Rursum ex diverso caeli caecisque latebris
Turba sonans praedam pedibus circumvolat uncis,
Polluit ore dapes. Sociis tunc arma capessant,
Edico, et dira bellum cum gente gerendum.

2. Translate into English :—

(a) Post filtrationem in balneo vaporis inter continuam agitationem ad spissitudinem syrupi evapo et extractum. Leni calore exsiccat in pulverem redigatur. Servetur caute in vasis bene clausis.

(b) Spiritus sit limpidus, coloris fere expers, ac acido plane liber, quamquam tempore facile accessit.

3. Parse fully—*opimis, dapes, cavata, sonans, capessant, gerendum* (Question 1).

4. Translate into Latin :—

(a) Three hundred of us have undertaken to put the enemy to flight and drive them across the river.

(b) "If," said the wise shepherd, "you had observed the weather, and had not forgotten the instructions I gave, you would not have come into this painful position. When, about a couple of weeks ago, an inundation took place, all the shepherds that were in the neighbourhood collected in haste and came to me for advice and promised to do what I recommended."

ENGLISH.

1. Parse fully :—"Sometimes what we regard as our defects may prove a real advantage."

2. Write a short essay on one of the following subjects :—

(a) "Science is the handmaid of invention"

(b) Advantages and disadvantages of anonymous journalism.

(c) The causes of Britain's commercial greatness.

ARITHMETIC.

1. A beam 20 feet long, $2\frac{1}{2}$ feet wide, and 10 inches thick weighs 17 cwt. 3 qrs. 12 lbs.; what must be the thickness of another beam of the same material $18\frac{1}{2}$ feet long, $4\frac{1}{2}$ feet wide, weighing 12 cwt. 6 lbs.?

2. Express $\frac{9}{13}$ of 9l. 6s. 10d. + $\frac{3}{4}$ of 16s. as the decimal of 3s. 6d.

3. If a gramme of hydrogen occupies 11.316 litres, what would be the approximate weight in grains of 356 litres of hydrogen?

FRENCH.

1. Translate into English :—

On fit ensuite une de ces énormes fautes dont le ministère ne s'est corrigé que dans nos derniers temps : ce fut d'altérer les monnaies de faire des refontes inégales, de donner aux écus une valeur non proportionnée à celle des quarts. Il arriva que, les quarts étant plus forts et les écus plus faibles tous les quarts furent portés dans le pays étranger; ils y furent frappés en écus sur lesquels il y avait à gagner en les reversant en France. Il faut qu'un pays soit bien bon par lui-même pour subsister encore avec force après avoir essuyé si souvent de pareilles secousses. On n'était pas encore instruit; la finance était alors, comme la physique, une science de vaines conjectures.

2. Translate into French :—

There is no month in the whole year in which nature wears a more beautiful appearance than in the month of August; it comes when we remember nothing but clear skies, green fields, and sweet flowers; when the recollection of snow and ice and cold winds has passed away from our minds as completely as they have disappeared from the earth, and yet what a pleasant time it is!

GERMAN.

1. Translate into English :—

Drei edle Schweizer, die ihr Vaterland liebten, Werner Stauffacher, Walther Fürst und Arnold Winkelried, beschlossen dasselbe von den grausamen Vögten zu befreien. Sie wussten, dass die Bauern ihnen beistehen würden. Arnold hatte noch besondere Ursache, sich an den Vögten zu rächen. Einer von diesen hatte ihm nämlich, eines kleinen Fehlers wegen seine schönsten Ochsen aus dem Pfluge spannen lassen, und als er sich darüber beklagte, antwortete der Knecht: "Wenn der Bauer Brod essen will, soll er selbst den Pflug ziehen." Arnold schlug im Zorn den Knecht auf die Hand, darauf entflohen er, und der Vogt liess seinem Vater die Augen ausstechen. Diese drei Männer kamen im November 1307 an einem einsamen Ort zusammen, und jeder brachte zehn Freunde mit. Die drei Auführer schwuren, im Namen Gottes, das Land zu befreien; die andern folgten ihrem Beispiel. Am Neujahrstag des nächsten Jahres sollte ihr Vorhaben ausgeführt werden, und bis dahin ging jeder wieder ruhig in seine Hütte.

2. Translate into German :—

There is no month in the whole year in which nature wears a more beautiful appearance than in the month of August; it comes when we remember nothing but clear skies, green fields, and sweet flowers; when the recollection of snow and ice and cold winds has passed away from our minds as completely as they have disappeared from the earth, and yet what a pleasant time it is!

Time allowed, Two Hours (3 to 5).

CHEMISTRY.

1. How is iodine prepared? Give its characters and chief tests.

2. What reasons have we for believing that air is a mechanical and not a chemical combination of nitrogen and oxygen?

PHARMACY.

1. Define (a) elutriation, (b) lixiviation, and mention a Pharmacopœia process in which the former is employed.

2. Describe the official process for the manufacture of citrate of iron and quinine.

BOTANY.

1. Define bracts, tendrils, stipes, and stipules.

2. Write a short account of the food of plants.

COUNCIL PRIZES EXAMINATION.

THIS was held on July 15, at the same time as the "First" Examination, Major men who were Associates of the Society when they passed the Examination during the year now ending being eligible.

CHEMISTRY.

Time : 2 to 5 P.M.

1. Explain the differences between Mannitol, Dulcitol, Galactose, Mannose, Glucose, and Laevulose.

2. What metals are commonly obtained by electrolytic processes at the present time, and how?

3. What is ethylic acetoacetate, and how is it prepared? Indicate some of the more important reactions in which it takes part.

4. Give a full description of how you would propose experimentally to determine the amount of heat which is liberated when strong sulphuric acid is mixed with water.

5. Give any instances with which you are acquainted of the formation of ring-compounds of carbon.

6. Give a clear account of the chief phenomena upon which the theory of dissociation in solution is founded.

BOTANY.

Time: 10 A.M. to 11 30 A.M.

1. Give an account, with diagrams, of the structure of a typical dicotyledonous leaf, and state fully the functions of the several parts.

2. Describe the structure, and manner of development from the pistil (*gynæcium*), of a fleshy fruit.

Mention some of the commoner means of distribution of fruits.

3. Enumerate the most convenient characters by which one may recognise the most important Natural Orders included in the *Calycifloræ*.

Describe any flower belonging to one of the Natural Orders mentioned, illustrating a means for favouring cross-fertilisation.

4. What is the nature and function of each of the following structures:—Callus, Sclerenchymatous Fibres, "Silver Grain" of Oak, Tendrils of Virginian Creeper (*Ampelopsis*), Calyx of Helleborus, Calyx of Dandelion, Potato tuber, Tulp bulb?

MATERIA MEDICA.

Time: 11.30 A.M. to 1 P.M.

1. Describe the varieties of aconite-root that are used for medicinal purposes; give their botanical and geographical sources. Give a brief account of the constituents of the official root.

2. How is menthol obtained? Give characters and tests to indicate (1) its purity, (2) its chemical nature.

3. Give some account of the preparation of olive oil. What are the causes of variation in quality of the genuine oil? How would you examine it for adulteration?

4. Describe with the aid of diagrams the structure of the roots of *taraxacum officinale* and *anacyclus pyrethrum*.

Legal Reports.

SALE OF FOOD AND DRUGS ACT.

WHAT IS MEANT BY LINSEED MEAL?

THE linseed-meal question has come before Mr. Swifte, the Dublin Magistrate. On Friday last Mr. Samuel Curham, pharmaceutical chemist, of South Richmond Street, Dublin, was summoned before him, at the instance of the Corporation, for selling $\frac{1}{2}$ lb. of linseed meal alleged to be adulterated. Mr. Tobias, who appeared for the defendant, first asked whether linseed meal was a drug. Mr. Rice, who prosecuted, said a drug under the Act included "medicine for internal or external use." Sir Charles Cameron, who gave evidence for the prosecution, said the linseed meal was adulterated by the addition of foreign farinaceous matter. It was useless for the purpose for which it was supposed to be used—namely, as a poultice. What a doctor meant when he prescribed linseed meal was ground linseed and not the thing sold in this case. It was time to put a stop to this practice of selling the meal of oilcake instead of ground linseed. Mr. Tobias said his client sold what was recognised by the Pharmacopœia as linseed meal, and he contended that this was what a purchaser expected to get. Sir Charles Cameron insisted that linseed meal ought to be the meal of linseed, and not the meal of linseed *minus* the oil. There had been convictions throughout Ireland for selling adulterated meal-cakes, and all they wanted was that the public should be protected in obtaining what they asked for. Mr. Samuel Curham deposed that he had been forty years in business, and he claimed that this article which he had sold to the inspector was pure linseed meal. He bought it as such, and he always tested the articles which he got, and was quite convinced of the accuracy of the description. It was in his opinion a very serious thing if he and his pharmaceutical brethren were to be fined for simply selling an article universally known as linseed meal, unadulterated in any way, just because some people insisted upon calling it by another name.

Mr. Swifte said he would give his decision in a week.

COUNTY COURT CASES.

BUYING A DRUG-STORE.

At the Southwark County Court, on Friday, Mr. Arthur Oldcorn, chemist and druggist, of the Pavilion Pharmacy,

Piccadilly Circus, brought an action against Dr. Thomas Gill Whitehouse, as acceptor of a bill of exchange drawn by the plaintiff for 20*l.*, dated October 19, 1895, and payable to plaintiff six months after date. The case had been remitted from the High Courts, and was heard by a jury. Mr. Blackwell, on behalf of the defendant, admitted the acceptance of the bill, but said it was under such circumstances as to constitute a misrepresentation. The defendant entered into negotiations with the plaintiff for the purchase of a business, known as Edwards's Drug-stores, at 302 Tabard Street, S.E. The plaintiff said the takings were 5*l.* a week, and the rent 42*l.* per annum. A portion of the house was let off, leaving the rent of the shop at 8*l.* per annum. The defendant agreed to give 85*l.* for the business, and paid 45*l.* deposit, and gave the plaintiff two bills of exchange for the balance when he entered into possession of the shop, but found the average takings were only 2*l.* 12*s.* per week. There was, under the circumstances, no value attached to the business, and the defendant wrote informing the plaintiff that he would not meet the bills. The stock and fittings were worth about 15*l.*, and the defendant by his deposit paid 45*l.* There was a counter-claim for 40*l.* and the return of the bills of exchange. Mr. Lewis Glyn, for the plaintiff, said the business had fallen off in consequence of the neglect of the defendant. After hearing evidence, the jury found for the plaintiff on the claim and counter-claim.

CLAIM FOR ARTIFICIAL TEETH.

At Blackburn County Court, on Monday, before Judge Coventry, Mary Elizabeth Feilding, a widow, sued J. Howell, artificial-teeth manufacturer, for 3*l.* 16*s.*, deposit made under an agreement for the defendant to supply her with a set of false teeth, and 1*l.* 1*s.* for non-delivery of the teeth and the negligence of the defendant acting as her dentist. The plaintiff said that the teeth supplied to her by the defendant, and for which she was to have paid 6*l.* 10*s.*, and for which she had already paid 3*l.* 16*s.*, gave her great pain. Randolph Sleigh, another Blackburn dentist, said he examined the teeth, and considered that they were badly fitted. He had supplied the plaintiff with a new set, which she was now wearing. For the defence it was contended that plaintiff had gone to defendant and asked to be supplied with a new set of teeth as quickly as possible, as she wished to leave the town. The contract was carried out quickly at her own request, and plaintiff had expressed approval of the work. His Honour said the question was one of contract, and as it had not been proved that the teeth were worthless or fitted by an incompetent person, he should give a verdict for the defendant.

THE X RAYS OBJECTED TO.

IN the Liverpool County Court, on Tuesday, a dock-labourer claimed damages for personal injuries from Messrs. Harrison, shipowners. The defendants admitted liability, and the only question was the assessment of damages. To prove the injury, Dr. Buchanan, assistant to the Professor of Forensic Medicine at University College, was called to put in photographs of the plaintiff's arm taken by the x rays. The defendants' counsel objected on the ground that this was a new discovery, and there was no evidence that Dr. Buchanan was specially skilled in regard to it. Judge Shand said he had not sufficiently studied the question to give an opinion, but he should admit the photographs and leave counsel to cross-examine and address the jury in regard to Dr. Buchanan's competence if it should be thought necessary. The photographs were taken with the splints on, and though there was a plate of sheet iron in the splint a view of the bone was obtained. On these another doctor gave his opinion that the arm would be shortened, and the jury gave the plaintiff 60*l.* damages.

THE VALUE OF A PERFUMERY BUSINESS.

IN the Lord Mayor's Court on Thursday the case of Grossmith v. the Central London Railway Company was concluded before the Recorder (Sir Charles Hall, Q.C., M.P.) and a special jury. It was a compensation case arising out of the proposed construction of a railway station in Newgate Street by the company named. The claimant (Mr.

Grossmith) sought to recover 13,689*l.* compensation for the compulsory acquisition of his leasehold premises, 85 Newgate Street, for the purposes of the station. Sir Edward Clarke, M.P., and Mr. Woodfin were counsel for the claimant; and Mr. Lawson Walton, Q.C., and Mr. Roskill appeared for the respondents.

Sir Edward Clarke, in opening, said the claimant had carried on the business of a perfumer, chemist, &c., at his present premises, 85 Newgate Street, for over forty years, and had developed the business into one of a very remarkable and very profitable kind. It was remarkable because there were probably few instances of a manufacturing business of that kind being carried on in such a profitable situation. He should be able to show the jury that it was a gradually improving business and a business which the claimant had every expectation of carrying on for years to come. Mr. Grossmith, fortunately, had been able to obtain another place in which to carry on his business, and therefore they had not to deal with the question of the practical extinction of the business. In addition to his premises at 85 Newgate Street, Mr. Grossmith had premises in Ivy Lane, which were used for the purpose of packing and despatching, and the proximity of those premises to the Newgate Street premises was an extremely important matter. Mr. Grossmith had taken new premises on the opposite side of the road, at the corner of Ivy Lane, known as 29 Newgate Street. There he would be able to carry on the business in the future, and although a great deal of expenditure would have to be borne by him before that place could be ready for occupation, still, when occupied by him, it would be quite convenient for the Ivy Lane premises, and, therefore, no question with regard to those premises would arise. The premises, 85 Newgate Street, were held by Mr. Grossmith under an agreement for a lease, or tenancy, which had existed since 1837. That lease expired in 1901, and the rent was 350*l.* per year. There were five and a half years to run at that rental, with, of course, a reasonable expectation of being granted a renewal at a slightly increased rent. Newgate Street was the great centre of the fancy trade, and the members of that trade were large customers for the sort of perfumery which Mr. Grossmith manufactured. There was only one place open to him in that street, the house which he had taken at 29 Newgate Street, and that had been suggested by the railway company themselves. For certain reasons the premises were altogether not quite so convenient to Mr. Grossmith as those which he at present occupied; on the other hand, there was a larger amount of space—about 3,000 superficial feet. But they were premises of a costly description. They were taken for a period of twenty-one years at a rental for the first seven years of 1,100*l.* per annum, for the second seven years of 1,200*l.*, and for the third seven years of 1,300*l.* That difference in rental did not exhaust the difference in annual expenditure. Mr. Grossmith would have to expend between 4,000*l.* and 5,000*l.* in preparing the premises for the carrying on of his business, and in addition to having to pay so heavy a rental, he would be compelled to bear the extremely heavy burden of the rates and taxes upon that expenditure—an obligation which Mr. Grossmith certainly would not have taken upon himself except under pressure of a most peremptory necessity. Up to the moment when Mr. Grossmith was bound to take the lease of 29 Newgate Street no suggestion had been made by the railway company or their representatives as to any other premises in which he could carry on his business. The arrangement of window-lighting, and so on, at 85 Newgate Street, and the proportion of wall there was for shelves, &c., made the old premises at least as useful as the new ones for Mr. Grossmith's purposes, and upon those new premises a very large amount of money would have to be spent. The estimate of Messrs. Sage for making the premises reasonably fit for Mr. Grossmith's business was over 2,000*l.* The peculiar nature of the business required manufacturing processes to be carried on in the basement, and great expenditure had been required in order to make it certain that those processes would not interfere with the comfort and convenience of neighbours. It had been necessary to build a shaft and erect other works. There would, therefore, be an expenditure of between 4,000*l.* and 5,000*l.* to properly fit up the premises; there would be an increased annual rental of over

800*l.* per annum for twenty-one years, and on those two heads the claim was for 8,500*l.* But that was not all. There were a great many things used by Mr. Grossmith in the old premises which would be of no use at the new ones—such as bottles bearing the address. Mr. Grossmith estimated his loss in connection with that at over 1,200*l.*, but only 500*l.* had been claimed from the railway company. There were also drainage and other works to be executed, and the total claim which was first of all put at the round figure of 20,000*l.* was, as he had stated, 13,689*l.*

Mr. Grossmith, the claimant, was then called and gave evidence in support of this statement. He said that he and his father had carried on the business for sixty years. He held the premises, 85 Newgate Street, under a lease from the Corporation of London, who were the freeholders, and five and a half years were unexpired. Mr. Grossmith proceeded to describe the method of manufacture, stating that he purchased raw material and converted it into made-up perfumery upon the premises named. He was a wholesale perfumer and scented-soap maker, but he had a retail shop-front. In the process of refining soap, essential oils had to be used and great care had to be exercised not to cause annoyance to neighbours. He had had many complaints, but he had taken every precaution, and the sanitary inspector had not thought it his duty to interfere. The whole of the manufacturing business was done in Newgate Street. The business had been a very successful one. Accountants had been on the premises for the last nine months, and his profits for the last year were over 4,000*l.* That was more than the previous year. He had tried to find other premises, but the only place available was that which he had taken opposite. The cost of fitting up the premises would be considerably over 4,000*l.*; before they could get into as comfortable a position they would have to spend 5,000*l.* Special plant would have to be provided in order to overcome objections by neighbours. They would have to have a more rapid way of mixing; and instead of their old process of mixing scent with soap when it was nearly at boiling-point, they would have to have another cold process known as milling. With regard to labels, he pointed out that no one would receive a finished article with a damaged label, and he estimated the cost of printing labels and stationery at 911*l.* In cross-examination, claimant said the railway company had offered him premises adjoining those he now held, but that was after they knew he had taken other premises at 29 Newgate Street. Counsel mentioned the names of several firms who had removed from addresses fronting large thoroughfares without, as he said, the removal having any effect on their wholesale trade. The witness, however, alleged that in one of the cases named the business had gone down 50 per cent. Messrs. Newbery & Co., he said, were druggists' sundriesmen; they were not included in the perfumery business. Messrs. Butler & Crisp were chemists, and they made up perfumes, as nearly all chemists did. He did not admit the suggestion made that the removal of a wholesale business to a side street, where rents were low, had no disadvantage. The average profits of his business for the last three years were, he should say, about 3,000*l.*, but he would prefer the figures being given by the accountant. He had not recently dissolved partnership. That occurred on June 24, 1894. He did not know without reference upon what basis profits were taken at the dissolution. The business carried on was mainly a wholesale business, and he thought the consequences of removal would be great.

Mr. Spain, an accountant, who had the investigation of the claimant's books, was called, and said the books were made up from June to June. The six months ending December, 1895, gave 2,931*l.* as profits on the business. The Christmas half-year was always the best. The profits for the year ending June 30, 1895, were 3,618*l.* No stock-taking had been made. The sales since that date had increased enormously. Comparing the sales of 1895 with those in 1896, they had in January increased 36 per cent. and in April 44 per cent. It was a rapidly increasing business. The profits for the year ending June, 1894, were 2,114*l.*; this was the amount the dissolution was based upon.

Mr. E. Farmer, member of the firm of Debenham, Tewson, Farmer & Bridgwater, land agents and surveyors, of Cheapside, was called, and said he had acted for Mr. Grossmith in this matter. He knew the claimant had taken

new premises at 29 Newgate Street. When he (witness) found that the new premises were taken he made out an estimate of claim on the basis of reinstatement. In the new premises there was an increase of floor-space over that at 85 Newgate Street of 2,802 feet. He had treated this as warehouse room, and had allowed 1s. per foot for it, that being the price paid by the claimant as rent of warehouse room in Ivy Lane. In the new premises the claimant was paying 960% for that which he got, deducting the surplus area, for 350% in the old premises, or an increase during five and a half years of 610% a year. There was also an increase on rates and taxes of 182%. Taking these figures for five and a half years on the 5-per-cent. table, they amounted to 3,730%, which the claimant was entitled to.

Mr. Bousfield was called, and said his firm acted on behalf of the late Mr. Alderman Salomons in the letting of the premises. He adopted the figures given by Mr. Farmer.

Mr. P. Panter, representative of Messrs. Sage & Co., produced that firm's specification for the fitting up of the new premises, which amounted to 2,096%.

Other evidences having been called for the claimant,

Mr. Lawson Walton opened the case on the behalf of the respondents. He said that if the claimant had chosen he could have obtained premises almost next door to those he was giving up, and having a somewhat larger floor space, at an increased rental of only 25% a year. The inference counsel asked the jury to draw was that the claimant did not regard the new premises, 29 Newgate Street, with that kind of aversion which he said really actuated him in the matter. The fact was that the claimant proposed to fit out the whole of the new premises with modern appliances. The mere fitting up of the premises alone was to amount to 4,000%; there were to be all sorts of conveniences entirely regardless of cost. It was simply a removal which would, with a growing business, have been inevitable, but was a little precipitated owing to the action the railway company had taken. The claimant, by paying more rent, obtained more for his money, and evidence would be called to show that he derived in respect of the increased rent a fully equivalent advantage in the facilities for carrying on his business. The jury could only arrive at the claimant's loss by valuing the property which the company were bound to take. The fixtures were said to be worth 850%, but the company were asked to pay 2,000%. They were willing to pay 420% in respect of plant and fixtures that could not be removed, and 60% expenses for removal. For trade disturbance there was claim for 2,000%. Trade disturbance meant a dislocation of trade, but in this case there was no dislocation of trade at all. Crossing the road could not, for practical purposes, break up his trade even if it were a retail business. But the claimant's was not a retail trade; he was described as a wholesale perfumer. His business was mainly with the provinces of England, and it was carried on by the agency of travellers. The wholesale business was mainly conducted by correspondence, and every letter would reach the claimant. The company were anxious that the claimant should get fair compensation.

Mr. Daniel Watney, surveyor to the Mercers' Company, was called for the railway company. He said he had seen the old premises, and also the new ones. The rental value of 29 Newgate Street worked out at 17s. per foot, and that of 85 Newgate Street at 9s. per foot. The amount the claimant was entitled to, in the witness's opinion, was a bonus of one year's rent or 350%; for fixtures and fittings, 650%; and for cost of removal and inconvenience 1,000%. would be a liberal sum to allow.

Mr. S. Walker, surveyor, gave it as his opinion that the claimant should receive 500% for the lease, 659% for fixtures and fittings, 150% for removal, and 1,000% compensation for inconvenience and disturbance—making a total of 2,309%.

Mr. Alfred Low, member of the firm of Low Son & Co., wholesale perfumers 81 Great Queen Street, said his experience of the wholesale perfumery and druggists' sundriesmen trade was that they frequently removed from leading thoroughfares into side streets for the purpose of obtaining better accommodation at lower rents. He should have thought that the claimant could have obtained suitable premises in a side street without interfering with the wholesale business. The disturbance of removal would affect the retail trade especially. The cost of removal would be slight, and

customers would have to be notified of the change of address.

Mr. Henry Ward, civil engineer, 110 Cannon Street, and Mr. Martin Vigers, auctioneer and surveyor, 52 Queen Victoria Street, were called and gave evidence as to the value of plant and fixtures.

In the result the jury assessed the damages at 9,000%.

New Companies and Company News.

CARPATHIAN PETROLEUM COMPANY (LIMITED).—Capital 60,000%, in 1% shares. Objects: To acquire certain concessions, and also options for the acquisition of certain concessions, rights, or licences in respect of property in Hungary and Roumania upon the terms of a provisional agreement dated June 30, and made between Albert Frommer of the one part, and W. Weller (for the company) of the other part, to hold, prospect, develop, utilise, work, and turn to account the said property, and to carry on business as engineers, ironfounders, oil-refiners, chemists, manufacturers of by-products from petroleum, chemical-manufacturers, &c.

TALBOT HERBAL REMEDIES COMPANY (LIMITED).—Capital 1,000%, in 1% shares. Objects: To acquire and take over the business of selling herbal remedies, drugs, medicines, and simples carried on by Charles H. Talbot, at 24 Wormgate, Boston, Lincs, and to carry on the business of chemists, druggists, patent-medicine vendors and manufacturers, and dealers in surgical instruments and appliances. The first directors (to number not fewer than two) are the said vendor, who is managing director, with 75% per annum, and Herbert Forester, of Golden Hill House, Longton, Staffs (remuneration, 1% per board meeting attended). Registered office, 22 Wormgate, Boston, Lincs.

THE RED CROSS GERMICIDE COMPANY (LIMITED) have converted their business into a limited company with 20,000% capital, a part of which is now offered for public subscription. The vendor of the business is to take 15,000 of the shares and 1,000% in cash for his property, but his shares are not to be entitled to dividend until 10 per cent. has been paid on the rest.

At the Counter.

How they are asked for at St. Neots:—"Tin of Aunt Mecca" (homocsa), "1d. castrated oil" (ol. ricini), "1d. newmonia" (am. carb), "1d. Percy pig powder" (hydrarg. ammoniat).—J. WISE.

AN East Anglian reports that his customers have asked for Sadler's pills (p. seidlitz), "oil of clover" (ol. caryoph.), "oil of petermin" (ol. menth. pip.), "crematum" (pomatum), and "corrugated soda" (sodæ bicarb).

WE find some distinct and ingenious novelties in orthography in a collection of originals sent by Mr. George Best, of Darlington. They include the following:—Yellow roka and coporas, dragons blood, dicklam, white goodaparsha, Zellers powders, essom of senna, Keatings Lodgins, mashed malice ointment, sauceperilla balls for the throat.

NEW SOUTH WELSH IDEAS OF PHARMACY.—Mr. Henry P. Thompson, who is travelling in Australia for S. Maw, Son & Thompson, writing to us from Albany, New South Wales, says he was in a chemist's shop in the town when a child presented the following order:—"Please give the little boy a pharos plaster and a box of Zedlass-poders, also a cheap emn with a long nek." Mr. Thompson doubtless booked a good order for cheap emns with long neks.

Trade Reports.

42 CANNON STREET, E.C., July 16.

THERE has been a rather large number of alterations, mostly, however, of an unimportant character, in the market since our last report. The chief articles that have attracted attention in fine chemicals are refined camphor, which is held for higher rates, and citric acid, which has advanced. Tartaric acid is firmly held, but cream of tartar is decidedly lower. Quinine remains quite dull of sale, and the price of salol has again been considerably reduced. Carbonate of ammonia is also offering at somewhat lower rates. In crude drngs there has been an upward movement in ipecacuanha, which is expected to attain still higher quotations in the near future. Crude camphor is much dearer on the spot and some improvement is reported in ergot of rye. Star-anise oil is also quoted a trifle firmer. Extreme prices have been paid for Jamaica and Lima sarsaparilla, but arrivals are likely to bring about a reduction shortly. Refined spermaceti is a little firmer. Californian honey dearer. The advance in castor oil is fully maintained, and colocynth is also held for extreme rates. Fine kinds of balsam copaiba are scarce. Opium is tending upwards, owing to bad crop reports. On the other hand, cod-liver oil is completely neglected, and at auction there was a drop of fully 10s. per cwt. in Soudan sorts of acacia gum. Scammony-root is arriving, and sells at somewhat lower prices. Oils of cassia and lemon-grass are somewhat easier. Balsam Peru offers at lower rates for arrival. In heavy chemicals we have to report a slight reduction in chlorate of potash. Sulphate of copper and arsenic are also cheaper. The price of miscible wood-naphtha has been reduced. Sulphate of ammonia continues dull, and so does bleaching-powder. Carbolic acid steady, but unchanged. Sulphur very firmly held. The Bank-rate remains at 2 per cent., and bar-silver is quoted at $31\frac{7}{16}d.$ per oz.

The following cablegram, dated July 9, was received by us too late for insertion in our last issue:—*Opium* and *Senega* root are decidedly firmer, while a lower tone is perceptible in *Tartaric acid*, *Cream of tartar*, and *Sugar of milk*, all of these being about 1c. per lb. lower on the week. *Quinine* is also declining, and *Curaçao aloes* is offering at somewhat easier rates. The *Peppermint* oil crop this season is very late, and has suffered much damage from insect-blight. Good *Huanoco coca-leaves* are offered at 25c. per lb. Our New York correspondent telegraphs on Thursday evening that *Opium* is rapidly advancing for fair druggists' grade; \$2.25 is now the quotation. *Tolu balsam* is scarce and dear at 43c. per lb. for genuine quality. New *Cascara sagrada* offers cheaply at $2\frac{3}{4}c.$ f.o.b. San Francisco. *Newfoundland cod-liver* oil of this season's fishing is very slow of sale at from 75c. up to 90c. per gallon, according to quality. Most medicinal roots are firm or advancing. *Senega* has risen 2c. per lb. from its recent low quotation. *Spermaceti* is also scarce and dearer, refined *American* of good brands being now quoted at 30c. per lb. bottom price. Fair bleached *American* beeswax offers at $27\frac{1}{2}c.$ per lb.

Our Amsterdam correspondent, telegraphing on Thursday afternoon, states that at to-day's auctions of Java cinchona bark 5,716 packages, comprising 489,518 kilos. of bark, were offered. The bulk of the bark was of the *Manufacturing* varieties, this section representing 23,698 kilos. of sulphate of quinine,

while *Druggists'* barks (weighing together 23,391 kilos.) represented 512 kilos. of sulphate of quinine. The average quinine contents of the *Manufacturing* bark was 509 per cent. The tone throughout the auctions was rather dull, 4,444 packages selling at an average unit of 2-85c. per half-kilo.—a reduction of 005c. on the general auctions, and exactly the same as the average price at the May auctions. The chief buyers were the English and American manufacturers, who bought 6,577 kilos. sulphate of quinine; the Auerbach factory, 2,493 kilos.; the Brunswick factory, 2,833 kilos.; the Mannheim and Amsterdam factory, 1,045 kilos.; the Frankfort-on-Maine and Stuttgart factories, 3,455 kilos.; and various buyers, 3,723 kilos. The range of prices was as follows:—*Manufacturing* barks, $5\frac{3}{4}c.$ to $33\frac{1}{2}c.$ (equal to 1d. to 6d. per lb.); *Druggists'* barks, $5\frac{1}{4}c.$ to 65c. (equal to 1d. to 1s. per lb.). The result of the sale was rather a disappointment to most persons concerned in the article.

Our Smyrna correspondent, telegraphing on Wednesday night, states that the market is strong and advancing, American agents having bought considerable quantities of fair *Manufacturing* opium at prices ranging up to the parity of 9s. per lb., f.o.b., an advance of about 4d. on the lowest point of last week. The buying still continues, and a further increase in price is expected.

There seems to be a strange confusion about the cocoa-butter duty. On July 2 the House of Commons resolved that a duty of 2d. per lb. should be levied on it. On Thursday, July 9, after a further debate, it passed a resolution declaring that "a duty of Customs of 1d. shall be charged on that product of the cocoa-bean which is generally known as cocoa-butter," the Chancellor of the Exchequer declaring that Messrs. Fry & Sons and other dissenting firms had declared their acquiescence in that modified duty. The presumption was therefore that cocoa-butter imported between July 2 and July 9 was dutiable at the rate of 2d. per lb., and that imported after July 9 at the rate of 1d. per lb. But upon making inquiry at the Custom House this (Thursday) afternoon, we were informed that no official order imposing a duty had yet reached that department, and that any cocoa-butter imported at this moment would still be admitted duty-free, unless indeed an order to the contrary should be received from headquarters before the lot was cleared. How to reconcile this statement with the House of Commons' resolutions we fail to understand. Is it possible that the official order giving effect to the resolution has become lost somewhere in the Circumlocution Office?

This is the way saffron is grown in the south of Spain:—The plant is raised from seed. The ground is lightly prepared to a depth of 6 inches, the seed is planted about $1\frac{3}{4}$ inch deep in rows, the plants being from $\frac{1}{2}$ to $\frac{3}{4}$ inch apart, leaving about 8 inches between each row. This is usually done in August. The first year there is no fruit, the second and third years should give abundant crops, but both quality and quantity diminish in the following years. After the sixth year it is customary to renew the plantation. There are two operations: one in summer, which consists in gentle hoeing; and one at the end of September or the commencement of October, a few days before removing the plant, in which the soil is moved with a special tool. Nearly all kinds of soil are suitable, but ground in which the plants are originally bedded gives the best result. The flower is picked as it blossoms out (from the middle of October to the beginning of November). It is taken indoors, stripped, placed in sieves, and dried over a very slow fire until all moisture has disappeared. In the market saffron is divided into the following classes:—Select, very superior, superior, ordinary superior, medinm, Tobarra, Baja, Aragon river, and Aragon

land. These classes are subject to further differences with respect to season. Prices have undergone heavy fluctuations, as in 1870 saffron fetched as little as 60 reales (the real is worth about 2*d.*) per Valencian pound of 355 grammes, whilst in 1889 the price rose to 260 reales. The present prices are from 70 to 80 reales, which is still low, as the average price is held to be about 120 to 140 reales, according to class.

ACID (CITRIC) has advanced, the spot quotation for *English* makes being now 1*s.* 2*d.* to 1*s.* 2½*d.* per lb.; offers of 1*s.* 2*d.* per lb. for *Laves'* brand have been refused to day. *Concentrated juice* is also firmer at 13*l.* 10*s.* per pipe, f.o.b. In Messina the prices for *Concentrated juice* both of lemon and bergamot are quiet with a slight demand. The exports in June were 275 pipes, against 383 pipes and 474 pipes in the same months of 1895 and 1894, respectively.

ACID (TARTARIC).—Steady, at 1*s.* 2½*d.* to 1*s.* 3*d.* per lb. for *English B.P.*, and 1*s.* 2*d.* for foreign, from second-hand holders.

ARSENIC is more plentiful, and offers at lower rates. Best white *English* powder can be had, on the spot, at 22*l.* 10*s.* per ton, perhaps a shade less.

BALSAM COPAIBA of good quality is scarce and firmly held. In some quarters as much as 2*s.* 2*d.* per lb. is asked for fine bright Maranham.

BALSAM PERU still keeps fairly steady on the spot, but for shipment quotations are declining. Small sales of genuine quality on the spot are reported at 8*s.* 6*d.* per lb., and for arrival there are buyers, but no sellers, at 6*s.* 6*d.* per lb., c.i.f.

BORAX is quoted by the combination makers at 19*s.* per cwt. for crystals, and 20*s.* per cwt. for powder, on the spot. Outside makers, however, are underselling these figures by fully 1*s.* per cwt. Refined boracic acid offers, according to maker, at from 29*s.* 6*d.* to 31*s.* 6*d.* per cwt.

CAMPHOR (CRUDE).—The market for delivery has been quiet during the greater part of the week, but since Wednesday much higher prices are quoted, and it is said that about 200 piculs have been sold, at the rate of 125*s.* per cwt. for Japanese and 115*s.* to 117*s.* for Formosa, while even more is asked at the close. For shipment the quotations are uncertain.

CAMPHOR (REFINED).—The manufacturers are still very busy, and to day it is announced that, in consequence of the advance in crude and the strong demand for refined, some of the German agents have withdrawn their quotations. Report also has it that one of the German makers has advanced his price for bells to 1*s.* 5*d.* per lb. for October delivery, but we have not been able to obtain confirmation of this.

CASCARA SAGRADA.—The *Strathdon* has brought 233 bales from San Francisco. A moderate demand prevails on the spot, the quotation running from 20*s.* to 21*s.* per cwt.

CASCABILLA.—A parcel of 73 bales has been sent over to London from Hamburg.

CHAMOMILES.—The drought, it is feared, will considerably affect the output of chamomiles in Belgium this season, and prices are expected to begin considerably above the starting quotation of last year, which was about 65*s.* per cwt. for good quality. The crop is about a week late, but samples are expected in the course of the next few days.

CHLORATE OF POTASH is easier; 4½*d.* per lb. is still asked in some quarters, but it is possible to shade that figure.

COLOCYNTH.—The London market is extremely firm, and almost concentrated in the hands of one holder. Good pale whole *Syrian* and *Cyprus* apple has been sold privately at 2*s.* 8*d.* per lb. and the owner now declines to sell any more below 2*s.* 9*d.* per lb. For fine *Spanish* quality 1*s.* 4*d.* per lb. has been paid.

COPPER SULPHATE has been reduced about 10*s.* per ton all round. The "Anchor" brand may now be had at 18*l.*, f.o.b. Liverpool; other brands at from 17*l.* to 17*l.* 10*s.*, on the spot or f.o.b. Liverpool.

CREAM OF TARTAR.—About 1*s.* lower on the week. Best white *French* crystals now offer at 96*s.* per cwt., on the spot. For powder the quotation still remains from 98*s.* to 100*s.* per cwt.

ERGOT OF RYE is perceptibly firmer, mainly, it is said, in consequence of large American purchases which have recently been made on the Continent, and are reported to amount to about ten tons altogether. For fair *Russian* ergot 5½*d.* per lb. c.i.f. is now asked, while *Spanish*, according to quality, is quoted at from 7½*d.* to 8½*d.* per lb.

GERMAN BOTANIC DRUGS.—New crop *Belladonna-leaves* are offering at from 52*s.* to 55*s.* per cwt., c.i.f. *Hungarian* ditto at 36*s.*, c.i.f., per cwt. *Belladonna* root, old crop, offers at 35*s.* per cwt. on the spot. New crop *Digitalis-leaves* are quoted at 25*s.* to 27*s.*, c.i.f. for arrival, and new *Hyoscyamus* leaves at 34*s.* per cwt., c.i.f. terms.

GLYCERINE continues to advance. Several of the German manufacturers have put up their prices in the course of the week. For double-distilled s.g. 1.260 from 74*s.* to 76*s.* is now asked in first hand. *English* brands may still, we believe, be had at 70*s.* for s.g. 1.250, but that is about the bottom quotation obtainable.

GUARANA might be had at 3*s.* per lb. for fair quality.

GUM ACACIA.—During the week a fair inquiry has been shown for certain kinds of *East Indian* acacia, especially *Ghatti*, of which about 600 cases have changed hands at 27*s.* 6*d.* to 35*s.* per cwt. So-called insoluble *Persian* gum is rather firmly held, a fact which prevents business. Fine pale picked is quoted at 24*s.* to 25*s.*; red to good sorts, 16*s.* to 20*s.* per cwt. Good pale *Aden* gum has sold in small quantities at 60*s.* per cwt. The market, however, has received a shock by the failure this week of a well-known speculator, who held, it is said, a good deal of stock of all varieties. At to-day's auctions a fairly large supply of about 3,800 packages was offered. The tone at the sales was still more dull than at the last auction, catalogue after catalogue being bought in without a single lot being sold. The chief parcel of interest which changed hands was one of 28 bales fair hard and soft mixed palish dark sorts, which were forced off at 70*s.* per cwt., a decline of fully 10*s.* upon the previous value. Fair red *Australian* gum realised 34*s.* Of *East Indian* gums only about 100 packages sold—red *Anrad* at 32*s.* 6*d.*; fair to good *Ghatti* at from 29*s.* to 40*s.*; fine pale ditto at 46*s.* per cwt. Several of the holders, however, are firm in their views, and not at all disposed to give way. After the auctions a fair business was done as usual at steady prices.

HONEY.—*Californian* is dearer, fine quality being now quoted at 33*s.* per cwt. on the spot.

INSECT-FLOWERS are very firmly held, but there is at present little, if any, demand. The Trieste quotation is 170*s.* per cwt., c.i.f., for closed flowers.

IPECACUANHA.—Several sales of *Brazilian* root have been made privately since the last auctions, mostly for export, at advances ranging up to 6*d.* per lb. on the recent sale rates. 6*s.* has been paid for fair sound annulated root, and it is even said that a few serons changed hands to-day at 6*s.* 2*d.* per lb. The general quotation is now 6*s.* 3*d.* per lb. The price of *Colombian* root has also been somewhat advanced, 4*s.* 9*d.* being now asked for good quality. The arrivals this week include 11 packages of *Colombian* and 14 packages of *Brazilian*. The last-named, it is said, are re-shipped to London from France, as it is felt that it will realise a better price here than on the Continent.

MENTHOL.—Slightly firmer for shipment; 9*s.* per lb. c.i.f. is said to have been paid for July-August shipment, while on the spot the quotation is 10*s.* per lb.

MUSK.—Several packages of first pile *Tonquin* pods are reported to have been sold since the last auctions at full prices on the basis of 74*s.* to 74*s.* 6*d.* per oz. for fine thin-skinned well-trimmed.

NITRATE OF SILVER, in 100-oz. lots, offers at 1*s.* 9*d.* per oz.

OIL (CASTOR) remains extremely firm, with a tendency towards higher rates. First-pressings *Calcutta* is now quoted at 3½*d.* to 3¾*d.*; second quality, at 3*d.* to 3½*d.* per lb. on the spot; while for shipment 2½*d.*, c.i.f. Liverpool, is asked.

OIL (COD-LIVER).—Our Bergen correspondent writes on July 11: "The market is quiet, and the transactions are extremely limited on account of the hot season. Non-congealing *Lofoten* oil offers at 170s. per barrel f.o.b., ditto *Finnmarken* at 165s. per barrel f.o.b., showing a fractional decline on last week's rates. The total exports of oil from Bergen amount to 2 120 barrels, against 2,280 barrels at the same date last year."

OILS (ESSENTIAL).—*Oil of citronella* is dull of sale, at from 1s. 4d. to 1s. 6d. per lb., on the spot, and from 1s. 2d. to 1s. 3d. per lb., c.i.f., in drums, shipment to the end of the year; while *Lemongrass* is tending rather easier, 2½d. per oz. being the spot quotation. *Star-anise* oil is a little firmer on the spot, business having been done this week at 7s. 6d. per lb. For July-August shipment, however, the price is rather easier, at 6s. 5d., c.i.f. terms. The quotation for September-October shipment is 6s. 1d., and for October-December shipment 5s. 11d. per lb., c.i.f. 14 packages of *Oil of limes* have just been received from *Dominica*. *Oil of limes* is still advancing; 5s. 6d. per lb. was the last quotation for distilled oil, but it is doubtful whether any can now be had at that figure. Hand-pressed oil is also very scarce at 5s. 6d. to 5s. 9d. per lb. *American oil of peppermint*, HGH, is quoted at 9s. 6d. per lb. by the importers, who report a firmer market. For second-hand, however, 9s. would probably still be accepted. *Wayne County* oil of good quality quotes at 7s. per lb. *Japanese* peppermint, dementholised, at 4s. 3d. per lb. One of the principal *Otto-of-rose* distillers in Constantinople states that the crop this year will be equal to about 111 T. oz., compared to the following crops in the nine years immediately preceding:—1895, 72 000 T. oz.; 1894, 57,750 T. oz.; 1893, 57,000 T. oz.; 1892, 42 000 T. oz.; 1891, 69,000 T. oz.; 1890, 75,000 T. oz.; 1889, 82,500 T. oz.; 1888, 75,000 T. oz.; 1887, 82,500 T. oz. It should be well understood, however, that perhaps four weeks may elapse before the new prices are fixed, and until that time nothing can be said definitely as to the rates likely to prevail. Some of the agents for French distillers have received notice that *Oil of spike lavender*, which is now about to be distilled, is likely to be about 3d. to 4d. per lb. dearer. Italian oils are quiet, but *lemon* is reported to be higher in some quarters. *Oil of cassia*: The market is barely steady; on the spot 7s. 3d. is still quoted for 70-per-cent. to 75-per-cent. oil. For arrival the tendency is decidedly easier—5s. 3d. per lb., c.i.f., would be accepted for 70-per-cent. to 75-per-cent. July-September shipment, but there are no buyers above 4s. 9d. per lb., c.i.f.

OPIUM is very firmly held. Some business has been done in manufacturing kinds, but owners generally are holding out for more money. Good to fine *Smyrna* opium is quoted at 9s. to 9s. 3d., second *Druggists'* at 8s. 6d. to 8s. 9d. per lb. *Soft shipping* kinds very quiet, at 11s. 9d. to 13s. 6d. per lb., according to quality. The cheap lots of *Persian* opium which offered recently have all been taken up, it seems, and the market is now again steadier. Quotations run from 11s. 3d. to 12s. 9d. per lb.

POPPY-HEADS.—In consequence of the extremely unsatisfactory reports regarding the new *Belgian* crop, one of the chief importers has ceased selling at 12s. 6d. per thousand for new crop. He expects new and presumably higher quotations within the next few days.

QUICKSILVER—On Monday the principal importers reduced their quotation from 6l. 10s. to 6l. 7s. 6d., a considerable business being done at figures between these two prices. Second-hand is quoted to-day at 6l. 7s.

QUININE.—Slow of sale. The nearest quotation for second-hand *German* bulk remains 12½d. per oz.

SAFFRON is extremely firmly held at from 32s. to 32s. 9d. per lb. downwards for best *Valencia*, and at about 25s. for *Alicante*. It is said that the market in Spain is exceptionally strong, and that all signs point towards a fresh increase in price.

SALOL.—The recent sweeping reduction in the price of this article has not sufficed in defeating the French competition, and it has therefore been found necessary further to lower the quotation. The older manufacturers did so on Friday last, when the quotation was further reduced to 3s. 2d. per lb.

SARSAPARILLA—A parcel of 54 packages genuine grey *Jamaica* and of 11 packages *Lima-Jamaica* has come to hand, and will be offered at next week's drug-auctions. Meanwhile consumers have been compelled to pay further increased prices. Privately it is said that genuine grey *Jamaica* has changed hands at as high a figure as 2s. 3d. per lb., while for *Lima-Jamaica* 1s. 9d. per lb. has been paid. *Honduras* root is offering at from 10d. to 1s. 3d. per lb., according to quality, and for fair *Mexican* 4½d. per lb. is asked on the spot. The *Atrato* has brought 90 packages this week from Colon. The following figures show the statistical movement of all varieties of sarsaparilla in the London warehouses during the first halves of the last six years:—

	1896	1895	1894	1893	1892	1891
Stock, June 30, pkgs.	285	410	303	331	330	230
Imported, Jan. 1 to June 30, pkgs.	517	702	526	639	579	433
Delivered, Jan. 1 to June 30, "	498	631	635	773	588	510

SCAMMONY.—Further sales of *Turkish* root are reported from Liverpool at prices very much below those for which the London stock is held. It is said, however, that the quality of the Liverpool stuff is inferior. It is to be noted that arrivals are coming in very freely, the *Indian Prince* having brought 222 bags from Beyrout this week.

SHELLAC.—The market during the week has been extremely dull, TN orange for August delivery being offered without finding buyers at 87s. per cwt. At auction the very small supply of 258 packages was offered, the bulk of this being sold at a decline of about 3s. per cwt. on second orange, other kinds being dull of sale. Cakey to medium, but blocky, second orange sold at 80s. to 82s., fair livery at 82s. to 83s., and good bright red at 85s. to 87s. per cwt. Of *Garnet* lac, 25 cases were bought in at auction. Privately the market is steady at 83s. to 84s. per AC brand; fair orange TN is quoted on the spot at 86s. Button lac offers at 95s. for firsts on the spot. At auction nothing of this kind was shown. Since the auctions the market has been fairly steady, but no business is doing. There are buyers of second *Orange*, TN quality, for August delivery at 88s. per cwt., and a fair spot-trade is reported.

SOY.—*Chinese* fairly steady, at 10½d. per gallon.

SPICES.—Quiet in most departments. There are, however, one or two exceptions, such as *Cassia lignea*, which is quoted at higher prices up to 32s. 6d., c.i.f. terms, for arrival. No business, however, is reported at anything approaching that price. *Pimento* shows a further advance. At auction only 520 bags were offered, of which 430 sold at an advance of about ½d. per lb., ordinary grey to good fair, to 2½d. to 2½½d. per lb. *Pepper* remains dull for all varieties. Nineteen cases fine bright bold white *Singapore* sold at auction at 5d. per lb. Privately white *Penang* pepper has been sold at 3½d. per lb., c.i.f., for steamer shipment, August to November. Black *Singapore* pepper for arrival is rather firmer, 2½d. per lb., c.i.f., being quoted for near at hand. At auction, on Wednesday, the entire supply of black pepper was bought in. *Nutmegs* are from 1d. to 2d. lower, several lots of *Penang* having been sold at auction without reserve. *West Indian* are fairly well maintained in price. *Mace*, flat and dull of sale. Of *Chillies* a parcel of 22 cases fine bold picked *Japanese* were sold after the auctions at 51s. per cwt. *Coriander* seed remains quite neglected: 232 bags *Mogadore* sold at auction at 6s. 6d. to 7s. 6d. per cwt., without reserve. *Jamaica* ginger continues in excellent demand at rather firmer rates. At auction 100 barrels realised from 72s. for common lean medium brown up to 100s. per cwt. for fine bright washed. *Cochin* ginger was rather quiet, about 100 bags selling at steady rates, from 35s. for ordinary washed up to 67s. for ordinary "A" cut. Privately, however, there has been a good demand at higher rates, with sales at 33s. 6d. to 34s. 6d. for washed, and 35s. to 36s. per cwt. for rough brown.

Heavy Chemicals.

Business in the heavy chemical trade is extremely slow, and the inquiries passing are very unsatisfactory. The demand for home consumption continues to be fairly steady,

but exports still continue very low for the season of the year. Changes in values are not very numerous, nor of much importance, the most notable being the strong advance in the price of *Benzols*. *Bleaching-powder* remains very dull, but the demand for *Caustic soda*, especially of high strength, is well maintained. *Sulphate of ammonia* dull: Beckton and Hull, 81.; Leith, 71. 15s. 3d.; Liverpool, good grey, 81. 5s. *Benzols* are very firm, and further advance in price is as follows:—90's, prompt, 3s. 1d.; August-December delivery, 3s.; 50-90's, prompt, 2s. 6d.; September-December delivery, 2s. 5d. *Carbolic acids* firm. *Aniline oil* and salt unchanged. *Anthracene*, A and B grades, fair inquiry. *Sulphate of copper* lower: Anchor, 181.; Liverpool, 171. 10s. *Cream of tartar* lower: powdered, 98s. to 100s.; crystals, 96s. White powdered *Arsenic* easier, 231. to 231. 10s. *Chlorate of potash* dull. *Chlorate of soda* fairly steady. Yellow *Prussiate of potash* in brisk request and firmly held. Recovered *Sulphur* scarce, with advance: 41. to 41. 2s. 6d. in 2-cwt. bags; in barrels, 51. 5s. Roll sulphur, 51. 10s. to 51. 15s. Miscible Wood *naphtha* easier, the price has declined to 3s. 3d. per gallon. Solvent wood *naphtha* remains at 3s per gallon. *Lime salts* firm. *Bichromates of potash and soda* in good demand at late rates. *Green copperas* quieter. White *Acetate of lead* very firm. Brown *Acetate of lead* steady. *Nitrate of lead* dull. *Sal ammoniac* in good demand. *Carbonate of ammonia* lower, 3½d. per lb. *Saltpetre* quiet.

The Liverpool Drug-market.

Our Liverpool correspondent, writing on July 15, says that there has been little movement in *Gum acacia* during the past week; one holder who has been off the market has come forward now as a seller, but he offers no inducement to buyers beyond the prices quoted by others. Good hard Soudan sorts range in value from 82s. 6d. to 95s. per cwt., and other grades in proportion. Sales have been made of new-crop African *Ginger* at 20s. per cwt., and old crop is firmly held for 22s. 6d. There has been a well-sustained market for *Castor oil*, good seconds Calcutta selling freely at 3½d. per lb.; first-pressure French, 2½d.; Madras good seconds at the same price; and second-pressure French realising 2½d. to 2½d. per lb. Holders are very firm in their views, and talk of yet higher prices in the near future. *Kola-nuts* are steady at the late rates. Some considerable business has been done in Chilean and Peruvian *Honey*, but the prices have not been allowed to transpire; they are believed to be low. About 110 bales of *Scammony root* were sold, after being offered at auction without eliciting any bids. It is believed they fetched somewhere in the neighbourhood of 40s. About 5 tons were offered at auction later on, but provoked no bids.

The American Drug-market.

Our New York correspondent writes on July 4:—"The market during the past two weeks has been quiet, with few features of interest. *Curaçao aloes* are held at 3½c.; 324 cases have arrived. This article continues to job at 3½c. Of *Gum chicle* 150,000 lbs. were sold during the past few days at prices ranging from 29c. to 32c.; importers are now asking 33c. *Balsam copaiba* is very firm: Central American, 38c.; Angostura, 40c.; and Pará 42c. No arrivals, excepting four cases of *Angostura*, which were offered by the importer at 38c., lowest. *Balsam fir (Canada)* moves slowly. *Black, hard bark of root* is scarce; 8½c. lowest. Country dealers have no stocks. *Cascara sagrada* occasionally receives attention at from 4c. upward, according to age. *Californian honey* is moving up, 6c. being now absolutely the lowest price for "light-amber" stock in this market. Of the "white" variety there are but few cases available, either here or on the Pacific coast. Snippers in California ask 6c. for stock there, and the total amount available at that point does not exceed 1,800 cases. The bee-keepers have organised to advance the price of new-crop honey when it reaches the market. The crop itself is a failure, and is estimated about 30 per cent. of that of last year. Considerable stock is changing hands here on a speculative basis. *Truxillo coca-leaves* sell slowly at 17c. to 18c. *Newfoundland cod-liver oil* is devoid of interest, the consuming season having passed. Notwithstanding the weakness of the Norwegian variety no change of importance has taken place in the price of this article. *Oil of pepper-mint* presents no new feature. *Cotton-seed oil* of all grades

is commanding very little attention, while prices are lower, 24½c. being now quoted for prime yellow. *Blood-root* is wanted by manufacturers, but it is very scarce. Several large lots of *Jalap* have arrived recently and sold at 10c. to 10½c. according to quality. *Mandrake root* is scarce; 4c. is the quotation. *Mexican sarsaparilla* is in a strong position at 6½c. jobbing. A parcel of 40 bales just arrived might be secured at ¼c. to ½c. less. Supplies in Mexico are reported exhausted. *Senega-root*: the crop is offering very sparingly, little digging having been done so far. *Spermaceiti* is slightly easier, the manufacturers' price being 29½c. *Beeswax* is selling to some extent at 27½c. to 28c. for unselected stock. The market is firm and supplies are not freely offered. *Linseed oil* now very low, 37c.; is expected to advance 4c. or 5c. in the near future, owing to a combination of the seed-crushers. *Opium*: There is no change in the situation, except an occasional sale at a trifle under the asking price, 82. *Quinine*: A fair jobbing demand is reported throughout the trade. Heavy sales are reported at 25c. to 25½c.; manufacturers' prices, 23c. to 30c."

The Smyrna and Constantinople Opium Market.

Our Smyrna correspondent writes, under date of July 3:—"The sales for the week amount to 39 cases, including 31 cases current talequale at 8s. 5d. per lb., f.o.b., for export to the United States, and 3 cases *Terli* talequale at 8s. 8d. per lb., f.o.b., for export. Five cases fair talequale manufacturing opium of the new crop have also been sold for export at the parity of 8s. per lb., f.o.b. The quality is very poor, no less than one-quarter having been rejected by the purchasers on account of inferiority. The market closes firm, with buyers at the quotations given above. Arrivals of new crop amount to 130 cases, against 310 cases at the corresponding date of last year. The news from the producing districts remains contradictory. It is said that 3,500 cases is now looked upon as the maximum yield of the crop, whereas 3,000 will more likely be the output. It is generally thought that during the current season the opening prices will average 20 per cent. to 25 per cent. above the present rates."

The English Drug-crops.

MESSRS. JOHN JACKSON & CO., of West Croydon, write:—

"A fortnight ago we should have given an opinion on the peppermint, lavender, and chamomile crops with a considerable amount of reservation.

"To-day, however, without being able to speak very definitely, we may state that the older plants of *Peppermint*, of two to three years' growth, have greatly suffered during the dry weather at the beginning of the season; they are very thin, and, as we have not been able to replenish the plantations with younger plants, this crop will be a poor one. As far as the young plants are concerned, we can only say that throughout the whole of the Mitcham district the farmers, on account of the dry weather, have only been able to replant to the extent of a quarter of their requirements; whilst by means of a new watering-apparatus, which traces furrows in the soil and at the same time waters each furrow at the exact spot destined to receive the young mint, we have been enabled again to put out a great many plants. The dry weather has not, therefore, interfered with our operations, and we are anticipating a very satisfactory crop. Our only regret is that we have not been able to apply this system to our two and three year old mint plants, because, on account of the poor crop of last year, the amount of peppermint oil available is small, and we are convinced that the price will remain firm. *Lavender*.—The severe winter of two years ago still makes its effects felt on the lavender of the present season, and it has been very difficult to obtain plants for extending the cultivation of this article. The lavender-crop will not be a very important one this year. *Chamomile*.—The fine appearance of chamomile after the winter raised great expectations, but, unfortunately, the want of rain has adversely affected the most advanced plants just at the same period as in preceding years. The flowers are few in number and very small. We cannot, therefore, hope for a satisfactory crop. *Rosemary* is the most promising of any crop this season. The long roots have scarcely suffered at all from the dry weather, and we anticipate a good yield of oil."



Memoranda for Correspondents.

In letters for publication correspondents are requested to express their views as concisely as possible.

Correspondents should write on one side of the paper only, and devote a separate piece of paper to each subject of inquiry.

The name and address of the writer should accompany all communications, with, if desired, a distinctive nom-de-plume.

The Importation of Proprietary Articles into France.

We have received the following letter from the Foreign Office in reply to our communication calling the attention of that Department to the grievance of British pharmacists and exporters in respect to the French regulations pertaining to the admission of medicines:—

SIR,—With reference to your letter of the 29th ultimo, I am directed by the Secretary of State to inform you that the President of the British Chamber of Commerce at Nice had already transmitted to her Majesty's Embassy Mr. Nicholls's complaint with regard to the difficulties experienced by English chemists in France in procuring certain pharmaceutical articles from England, and I am to enclose a copy of the reply which Lord Dufferin caused to be addressed to that gentleman after consultation with one of the leading chemists in Paris.

I am to add that under these circumstances Lord Salisbury does not consider that any useful purpose would be served by addressing a representation to the French Government on the subject.

I am, Sir, your most obedient, humble servant,
Foreign Office, July 11. H. PERCY ANDERSON.

[Copy]

Paris, 21 April, 1896.

SIR,—I am directed by her Majesty's Ambassador to inform you that he has under consideration your letter of the 1st of April enclosing a communication from Mr. Nicholls, a chemist at Nice, with regard to the difficulties English chemists have to contend with owing to the existing regulations for the importation of English medicines into France. Similar complaints have on previous occasions been addressed to her Majesty's Embassy, but the French Government has persistently declined to modify the regulations, which are based on a decision of the Minister of Commerce prohibiting the importation of any foreign compound pharmaceutical preparation of which the formula is not published in an official Pharmacopœia. Exception, however, is made in favour of medicines similar to those of the Pharmacopœia, in which case the Minister grants a special authorisation after taking the advice of the Paris School of Pharmacy, and I am informed that advantage is often taken of this permission by English chemists practising in Paris.

His Excellency would therefore recommend that Mr. Nicholls should follow the same course, and ask for a special authorisation in each particular case.

I may add that the profession of chemists in France is governed by the Law of Germinal 21, An XI., which specifies (Article 32): "Les Pharmaciens ne pourront livrer et débiter des préparations médicales ou drogues composées quelconques que d'après la prescription qui en sera faite par les docteurs en médecine et en chirurgie, et sur leur signature. Ils ne pourront vendre aucun médicament secret. Ils se conformeront, pour les préparations ou compositions qu'ils devront exécuter et tenir dans leurs officines, aux formules inscrites et décrites dans les dispensaires et formulaires qui ont été rédigés, ou qui le seront dans la suite, par les Ecoles de Médecine."

Titre II., Article 7: "Tout individu qui aura découvert un remède et voudra qu'il en soit fait usage, en remettra la recette à notre Ministre de l'Intérieur."

A new law on pharmacy is at present under the consideration of the French Parliament, and it is possible that the English chemists in Paris will endeavour to procure the adoption of regulations more in conformity with their requirements.

I am, &c.,

(Signed) C. HARDINGE.

Mr. Jaffé, President British Chamber of Commerce.

SIR,—We have read with much interest your leader on the importation of proprietary articles into France. As it contains one inaccuracy, we should be glad to point out that the verbal remark made to your representative was that "years ago the French authorities alleged that Valentine's meat-juice was a 'secret remedy,' and its importation had, to our knowledge, caused difficulty." He further remarked that since Dr. W. D. Hogg had been appointed Messrs. Valentine's agent for France all the trouble was at an end.

The whole subject was touched upon in a conversational way, but the facts are matters of past history, and were only adduced as a further instance of the vagaries of the French official mind.

Yours faithfully,

F. NEWBERRY & SONS.

Piperazine in Gout.

MOST HONOURED MR. EDITOR,—You will surely allow old Hager, who, in the evening of his life, is seriously troubled with gout, to communicate to your valuable journal something concerning experiments made by him on his own body with gout-remedies.

My gout appears to be partly hereditary and partly the result of my sedentary habits. It is remarkable that the malady only showed itself in my eightieth year, but to make up for this it now twitches my person all the more virulently. After trying other remedies I essayed piperazine, and I may say at the outset that I did well thereby. After using the remedy continually for three or four weeks I at last experienced the desired result, the pains and serious swellings having alike subsided, so that I can walk about in my room again without crutches. I eschew acid foods and drinks; meat I eat sparingly.

My experience shows that, especially in hereditary gout, piperazine must be taken for a long time, as a short treatment has uncertain results, and is often of little or no use. A prolonged employment of the remedy is without any ill effects on the body, and even doses of 15 gr. three times a day do not injure the stomach. When the swellings diminish it is well to continue piperazine for some time in reduced doses of from 10 to 12 gr. three times a day. Piperazine may be suitably taken with soda-water. The daily dose should be divided into several portions, in order that its elimination may not proceed so soon as when a single large dose is taken. I have noticed a considerable increase in the efficacy of piperazine by adding, after two or three weeks' application, a diuretic to the dose. Excellent for this purpose is a decoction of bean-pods, which can be taken either with weak coffee or with piperazine and milk, or with piperazine only. From 4 to 6 dr. of bean-pods may be taken daily, but only in cases where the diuretic action of piperazine slackens considerably or ceases altogether. My recent removal from Frankfort-on-the-Oder to Neu-Ruppin I have been able to carry out without the slightest inconvenience, which was quite unexpected.

With respectful greeting, yours,

Neu-Ruppin, July 28.

DR. H. HAGER.

[We publish this letter because the writer is a man who for half-a-century or more has occupied a position of the highest eminence in German pharmacy, and his name may be considered a guarantee that no mere advertisement of piperazine is intended.—ED. C. & D.]

Insects and Drugs.

SIR,—I am surprised to find *anisi semen* and *carum* in Professor Sayre's list of drugs not attacked by insects. Either the conditions must be very different out there or the insects of Kansas have a good deal to learn from their brethren on this side of the water.

I am, &c.,

Epworth, July 10.

C. C. BELL.

Somerset House Milk.

SIR,—The information contained in your excellent paper, the *C. & D.*, is generally correct, but I hope you will pardon me in writing for you *re* answer to "Inquirer" (115/73) in today's issue. The standard at present for milk of Somerset House, and the Society of Public Analysts, is total solids, 11.25 per cent. (fat, 2.75; non-fatty solid, 8.5).

Yours truly,

ARTHUR E. EKINS,

Public Analyst for Herts and Luton, Beds.

The County Laboratory, St. Albans, July 10.

The New Duty on Cocoa-butter.

SIR,—Referring to your article on "Cocoa-butter" in the current issue of *THE CHEMIST AND DRUGGIST*, we beg to point out that, although in our letter of July 8 we stated that cocoa-butter formed 50 per cent. of the whole cocoa-bean, we named this as the exact percentage possible of extraction, and we regret that we led you thereby into supposing that it was usual to extract all this quantity in the preparation of cocoa-powder, which is not the case. The actual amount varies with different makers of pure cocoa, from 23 per cent. to 30 per cent. of the whole material.

We also further stated that the husk of cocoa, which is subject to a duty of 2s. per cwt., formed 16 per cent. of the whole bean. We would point out that this is not the only loss in manufacture, and that 22 per cent. to 23 per cent. more exactly represents the whole waste.

If you will compare these figures with the others you quote you will easily understand the cause of variation in the percentage of final product obtained by various makers.

Yours truly,

July 15.

C. BARRY & CO.

Fatal Formulæ.

Mr. J. M. Smith, chemist, Maryport, informs us that the prescription ordering 2 oz. of tincture of nux vomica in a 6-oz. mixture recommended in *Woman's Life*, and on which we commented last week, was brought to him to dispense soon after the paper was issued. Mr. Smith, of course, corrected the ounces to drachms, and explained to the lady customer the danger of the formula as printed.

Voluntary Early Closing.

SIR,—In reference to Mr. Corbett's article on Shops' (Early-closing) Bill, allow me to state that I had always shut up at quarter to 11 until twelve months ago, and a brother chemist round the corner always closed at 10 o'clock. I thought I would do likewise and obtain a little rest. I shut up at 10 o'clock, and now my neighbour keeps open until after 11 o'clock every night.

Yours faithfully,

Battersea, S.W., July 13.

FAIRPLAY. (124/41)

Carter's Prices.

SIR,—I was unaware of the advance in price of Carter's little liver-pills until the arrival of a fresh supply last week, when I instantly returned the goods in question to the wholesale house from whom I have for many years obtained them, preferring to pay carriage rather than any longer keep them in stock. For two years past my neighbours and myself have resolved to no longer stock any proprietary where a similar course has been adopted. Three years since my outlay for medicine-stamps did not exceed ten shillings per annum; last year ten pounds did not cover the same. At present many wholesale houses supply thoroughly reliable remedies of every description exquisitely packed, with seller's name and address, and which can be recommended to customers with the greatest confidence, thus saving the trouble of making and packing, and these, for the most part, I avail myself of.

Within the past two weeks I have, for the reason named, erased from my list three articles formerly in good demand.

Yours faithfully,

VERBUM SAP. (13/7.)

SIR,—How is the ordinary chemist to receive any benefit from fixing minimum selling prices if manufacturers arrange their wholesale prices on the lines of the Carter Medicine Company? Only large stores can buy 5 gross of Carters' pills at a time. They will thus get them 1s. less per dozen than the chemist, and can sell them at even less than the chemist buys them for, and still have a profit. This is simply playing into the hands of the stores, and I do not see how an anti-cutting association is to help us. And even though we could get fixed minimum selling prices for all proprietary articles, where is the Anti-cutting Association that will prevent the stores cutting the prices of drugs, &c. What we want is legislation to prevent any but qualified chemists from selling poisons, dispensing medical prescriptions, and compounding official formulæ.

Yours truly,

A QUALIFIED CHEMIST. (120/27.)

SIR,—The custom of selling other people's manufactures with a profit of $\frac{1}{2}$ d., or with no profit at all, is getting very general, so that those who object to this custom are being forced to consider whether the time has not arrived for cutting off that branch entirely. No doubt it does one harm to ask a higher price than a neighbour asks for the same article; consequently, one is better not to keep it at all than to sell at a higher figure. Then the public, seeing the readiness with which prices are cut, have been known to play one off against another, in order to discover the lowest possible.

While we are grateful to those who have adopted plans to ensure the retailer a profit, it is clear such plans will never be general until it can be shown to be to the advantage of the manufacturer. It may be wiser to go on selling many patents at cost-price in order to retain one's customers, but chemists cannot be expected to say a good word for them if asked for it. Chemists are being forced to see that the only way to make a living is to sell their own preparations.

Yours,

W. C. (125/55.)

SIR,—Seeing in this week's issue of the *C. & D.* a letter from a Liverpool gentleman relative to Messrs. Boots' endeavour to obtain Carter's pills before the advance in price was announced, I write to state the same thing was attempted here in Bath. Their manager here went from shop to shop asking to be obliged with as many Carter's liver and nerve pills as possible, as he had a "shipping order" to execute. Though Bath is a "watering-place," it is doubtful whether any of our river-tugs would be likely to commission Messrs. Boots with a "canal-barge" order. This funny excuse gave the game away, so I don't think they profited to any great extent by the measures they adopted.

Yours truly,

FAIRPLAY. (122/7.)

A chemist in another part of the country, who does not wish his name or locality to be mentioned, reports that he experienced a similar proceeding on the part of Messrs. Boots. We have also information that a similar attempt was made by Messrs. Boots at Lincoln.

Daisy Powders.

SIR,—What is a safe dose of daisy powder? I find that it will be necessary to reweigh them before the public get them, on account of the large and varying quantity in the papers. I have had the curiosity to weigh six powders taken out of a packet. The weights are respectively 17, 11 $\frac{1}{2}$, 11, 9, 8, 5 $\frac{1}{2}$ gr.

Yours truly,

A LOVER OF ACCURACY. (122/54.)

[We presume that the makers of daisy powders have by this time adopted a more accurate method of division than that which seems to have obtained hitherto. The powder appears, from Dr. Thomas Stevenson's analysis, to be acetanilide, the dose of which by itself should not exceed 3 gr.—ED. *C. & D.*]

MISCELLANEOUS INQUIRIES.

N.B.—All queries should be accompanied by the business card of a subscriber, or the address label from THE CHEMIST AND DRUGGIST wrapper. We destroy anonymous letters. We do not answer queries of the kind here dealt with by post. We ask that separate queries shall be written on separate sheets of paper.

No SAMPLES will be analysed and reported upon unless the sender labels the sample with his name and the name of the article, and informs us (not necessarily for publication) by whom the article is made, for what purpose and how it is used, and any further particulars of interest.

Back numbers containing formulae, educational or other specific information can be obtained from the Publisher.

125/6. *J. R. E.*—No one has succeeded to the late Sir Andrew Clark's practice, for such consulting practices are never sold. Sir Andrew's house in Cavendish Square was still to let the last time we passed through the square. We understand that Dr. Lauder Brunton has got a large proportion of Sir Andrew's patients, while some of the connection has also gone to Dr. R. W. Burnet, who at one time was an assistant to Sir Andrew Clark. Addresses of physicians are given in the DIARY.

112/17. *H. S. P. Brown*—Drawer labels.—Flour-paste is the best thing for sticking these on. The secret of their sticking lies in the way it is done. The best way is to allow the paste to soak well into the paper; six or eight must be pasted before any are applied. Take the one first prepared and place it on the drawer, the others in succession. When dry, with a flat camel-hair brush give them a coating of a warm solution of isinglass, allowing it to go over the edges of the labels. The solution is best made by dissolving $\frac{1}{2}$ oz. of isinglass in $\frac{1}{2}$ pint of water, and adding 3vj. of rectified spirit. When again dry, proceed to varnish with a brush similar to the one before used (the same will do if cleaned and well dried). The brush, previously dipped in the varnish, must be drawn quickly once forward and backward, covering as much of the label as possible at each stroke. Take care that the brush be not drawn over too frequently, nor the strokes allowed to cross each other, as that will make the varnish appear uneven. The process should be carried out in a warm room, and a small portion of the varnish allowed to pass over the edges of the labels to secure the whole. The same method is followed in labelling shop-rounds.

99/83. *Tragacanth*.—Essence of Ginger Ale—See last volume, pages 336 and 615. Soluble Essence of Lemon.—See *C. & D.*, August 25, 1894, page 332, and reply to "Jamie." Two ounces of these essences to a gallon of syrup. In regard to the preparation of syrups, &c., see Stevenson & Howell's "Aërated Beverages, and How to Make Them" (2s. 6d.)

111/39. *Wet Water*.—The price was probably printed in error.

117/2. *T. F. E.*—(1) The dose of Chelsea Pensioner is 1 to 2 teaspoonfuls. Some prescriptions, however, say tablespoonfuls, but that is quite excessive. (2) Add to the solution a few drops of ammonia solution, and allow the white precipitate to settle. Decant the clear solution, and warm gently to drive off excess of ammonia.

118/35. *Flycatcher*.—You will find what you want in the DIARY. See also recent replies.

118/22. *W. R.*—See reply on page 34, July 4.

112/14. *Restorer*.—Sulphur Hair-restorer.—See *C. & D.*, April 13, 1895, page 536.

115/65. *Raspberry*.—We have no formula by us for raspberry-wine made with essence.

116/26. *Saline*.—Your sample of Furniture-polish is of the "reviver" class, and is represented by the following formula:—

Ol. lini	3iv.
Ac. acetic. dil.	3iij.
S.V.M.	3j.
Liq. antim. mur.	3ij.

M.

Apply sparingly by means of a piece of flannel.

109/70. *Knird*.—Lemonade-powder.—We make your powder to be this:—

Ac. tartaric.	3j.
Ol. limonis	3vj.
Pluv. sacch. alb.	3j.

Misce bene.

Mix with a pint of water to make lemonade.

109/90. *Brown Leather*.—We published an analysis of Leather-dressing like your sample on page 365, August 31, 1895, to which please refer.

117/35. *Warkworth*.—(1) Sarsaparilla Syrup, "immensely popular in mining districts as a drink, made by adding three teaspoonfuls to a tumbler of water":—

Dec. sarsae co. B.P.	0ij.
Ac. tartaric.	3iv.
Sacch. alb.	3ij.
Sacch. ust.	q.s.

Dissolve the sugar and acid in the decoction by heat, strain, and add burnt sugar to darken if necessary.

(2) The ointment contains a poisonous vegetable alkaloid.

114/47. *North Pole*.—Composition of Spice for Making Mock Paté de Fois Gras:—

P. myrist.	3j.
P. caryoph.	3ij.
P. cinnam.	3ij.
P. capsici	3ij.

M.

117/17. *G. G.*—For the very old case of Tinea Capitis you might try oleate of copper in form of ointment:—

Cupri oleat.	3ij.
Paraffin. moll.	3j.
Paraffin dar.	3ss.

M.

This is to be lightly rubbed in morning and evening. The strength may be increased to double.

112/65. *Subscriber*.—The pink pellets are saccharin with a little bicarbonate of soda and coloured pink with carmine. Any maker would supply them tinted, although, as you say, there is no virtue in the colour.

117/18. *Transvaal*.—For the pastilles to contain liquorice, terebene, borax, and salt you cannot do better than use the Glyco-gelatine of the Throat Hospital modified as follows:—

	Oz.
Refined gelatine	1
Glycerine (by weight)	2½
Liq. extract of liquorice	½
Orange-flower water	2

Soak the gelatine in the water for two hours, then heat on a water-bath till dissolved, then add the gelatine and liquorice, and stir well together. When nearly cold add the necessary quantities of the medicaments, so that each pastille shall weigh 30 gr. and contain terebene ℥ij., borax and salt of each 2 gr.

119/40. *X. Y. Z.*—Mr. Startin and Dr. Tom Robinson are two of the leading London specialists in the hair. You will find their addresses in the DIARY list.

116/63. *Cootamondah*.—(1) The Nerve and Brain Tonic is Easton's syrup highly coloured. (2) The sample of bark is not a cinchona. It closely resembles *Alstonia constricta*, but we cannot tell with certainty from the powdered specimen you send. *Alstonia constricta* (Australian fever-bark) has long been used as a febrifuge.

84/22. *A. E. M.*—We have had some difficulty in tracing the formula for the vinegar, owing to the vague reference. The quantity of rectified spirit ordered is 1 gallon. *Tr. eucalypti glob.* is indicated in the formula supplied to us, and is apparently right, for the same quantity of oil would be quite excessive. We would prefer the oil, say, a quarter of the quantity.

122/56. *Analysis* has had the subjoined copies of a public analyst's certificates brought to him by an inspector, on the supposition that the calculations are incorrect:—

The sample of whisky had an alcoholic strength of 27·8° under proof, and contained the parts as under—

Absolute alcohol..	..	..	..	..	34·3
Water ..	..	..	..	..	65·7

This corresponds to a mixture of whisky of the minimum legal strength 25°—

					Parts
Under proof ..	..	..	..	..	92·6
Excess of water ..	..	..	..	..	3·8

The sample of gin had an alcoholic strength of 39·2° under proof, and contained the parts as under—

Absolute alcohol..	..	..	..	..	28·6
Water ..	..	..	..	..	71·4

This corresponds to a mixture of gin of the minimum

Legal strength ..	..	..	..	..	93·7
Excess of water ..	..	..	..	..	6·3

OBSERVATION.—By section 6 of the Sale of Food and Drugs Act Amendment Act of 1879 the minimum strength for whisky, rum, and brandy is fixed at 25° under proof, corresponding to a mixture of 35·9 per cent. of absolute alcohol and 64·1 of water; and for gin 35° under proof, corresponding to a mixture of 30·8 of absolute alcohol and 69·2 of water.

"Analysis" reckons the whisky to contain 4·5 per cent. of water in excess of the legal requirement, and the gin 7·2 per cent. It will be noticed that the analyst gives his percentages of absolute alcohol *by weight*, and has made his calculation of excess of water from the percentages *by volume*:— $35·9 = 42·9$, $34·3 = 41·1$, $30·8 = 37·1$, and $28·6 = 34·6$ so that his percentages of proof spirit and water are by volume, which is the easiest way for the magisterial mind to grasp how many parts of legal spirits have been diluted with parts of water. The figures look foggy, because they are a mixture of three factors—(1) per cent. by weight, (2) per cent. by volume (both of these meaning a mixture of absolute alcohol and water), and (3) the figures for a mixture by volume of legal whisky or gin, and water.

116/61. *Chow Chow* (China).—There is no book published on the manufacture of infants' foods. Papers have been published on the subject, but it would not be worth anyone's trouble to make a book of them. You will find numerous notes on the subject in recent volumes of THE CHEMIST AND DRUGGIST.

117/70. *W. Preston*.—We do not know the preparation which you refer to. What is it like?

117/72. *W. F. L.*—Please put the powder "through the chart." We are obliged to decline work of a purely personal character.

231/37. *W. W. D.*—The formula has been recently given. Please consult the index.

120/42. *Cortex*.—Your request comes within a group of subjects which are not suitable for discussion in these columns!

116/72. *Inquirer*.—The only formulæ we have are:—
Brush-powder: Equal parts of sodæ carb. and household soap, dried, powdered, mixed, and perfumed. Some retailers simplify matters by giving Hudson's soap-powder.
Sponge-powder: Dried sodæ carb. and about 5 per cent. of sodium metasulphite mixed with it.

116/58. *Tannigen*.—You will find in Allen's "Commercial Organic Analysis" a full description of a reliable process for the estimation of methylic alcohol. The above work is excellent, but you may find Thorpe's "Dictionary of Applied Chemistry" suit your purpose better.

120/35. *Rhei*.—The thickening of the cochineal-colouring is due to fermentation, and does not always take place. In making it use recently-boiled distilled water containing 1 gr. of salicylic acid in each ounce. The formula is one which we have known a contributor to use in his own business for fifteen years, and he finds it uniformly satisfactory.

121/44. *M. K.*—We have tried, but cannot recollect, the formula which you mention. We shall endeavour to find out for you; but please remind us of the matter within a month.

121/43. *Cemicus*.—The rare metals are fairly fully dealt with in Thorpe's "Inorganic Chemistry," vol. ii., published by Collins at 6s. For complete information you must refer to Watts's "Dictionary of Chemistry."

121/30. *Barium* is apparently a student, for he asks us how it is that barium sulphate is converted into the sulphite, or even to sulphide, by heating in the blowpipe flame? He forgets that there is plenty of carbon, real or potential, in the flame which extracts oxygen from the sulphate—i.e., reduces it.

120/62. *Antonio*.—(1) We do not know what Scott's essence for deafness is like, far less the composition of it. (2) Methylated Soap Liniment may be legally sold, so far as the Excise is concerned; but you have to reckon with the Sale of Food and Drugs Act, which would make you liable on conviction to a fine. It is not likely, however, that a conviction would be obtained, as the methylated liniment is so generally sold that the magistrates could be assured that that is done for the sake of economy, and not to the prejudice of the purchaser.

INFORMATION SUPPLIED.

For this section we are always glad to receive from subscribers brief notes on practical subjects, recipes which have been found good in practice or which have required modification, and hints or fresh ideas on any pharmaceutical or trade matter.

Pickled Mushrooms.—The formula you give is an excellent one. It is necessary to get rid of most of the moisture in the mushrooms to prevent it diluting the vinegar. Beware of mace. The mace in blades which looks so handsome in some makes of bottled mushrooms must have been exhausted for some other purpose. It is so easy to overpower the flavour of the mushroom. Use only the merest pinch, if any.
W. J. CHURCHILL.

INFORMATION WANTED.

The Editor invites, on behalf of inquiring subscribers, postcard replies to the following:—

122/8. Composition of Monkton's pills.

126/4. Makers of oiled silk.

125/34. Makers of or dealers in drum-shaped carbonate-of-soda casks, or where the wood to make them can be obtained.